

The Visitor at the Museum of Fine Arts:
Designing for Movement Patterns and Information Needs

by

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of the Requirements for the


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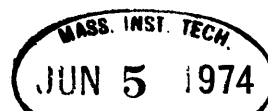
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ABSTRACT

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Submitted to the Department of Urban Studies and Planning on May 10, 1974
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The experience of an individual visitor to a museum as complex as the Museum of Fine Arts is heavily dependent on his ability to locate himself within the building and to move freely throughout it. To accomplish this, the visitor develops an image of the environment that allows him to navigate efficiently. This image is a product of both his own movements and the informational and environmental attributes arrayed within the museum. By manipulation of this information and environment, a designer can affect the ease at which the visitor behaviorally uses and intellectually structures the environment in which he finds himself.

Different visitors, however, have unique patterns of movement and information needs. For the most part, these patterns are related to how specific a visitor is about what he wants to see-- visitors who come to see the museum in general and visitors who come to see specific collections each being consistent within their own classes. A clear understanding of the patterns that develop within each class is therefore necessary for effective design. Once understood, criteria for developing information systems, as well as for re-designing the environment, can be constructed.

Thesis Supervisor: Gary Hack

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Index to Appendix

A. The Physical Plan of the Museum.....	91
B. Research Techniques.....	94
C. Research Tools.....	101
D. The Behavior of the Museum Visitor.....	111
E. Museum Survey.....	133
Footnotes.....	135

Index

1. Background.....	6
2. Recommendations.....	12
3. The Visitor Within the MFA: Identity and Characteristics.....	22
The Museum Visitors	
The Museum Structure	
4. The Visitor Within the MFA: Patterns of Movement.....	30
Inclinations of the Visitor	
Touring With Other People	
The Museum Setting	
Sources of Information	
5. The Visitor and the MFA: Way-finding and Understandability....	44
Components of the Enviromental Image	
The Map Learning Process	
The Decision-Making Process	
Image Formation	
6. Analysis of Alternatives.....	62
Symbolic Devices	
Re-training the Observer	
Re-shaping the Enviroment	
Overview	
Appendix.....	90

Index to Appendix

A. The Physical Plan of the Museum.....	91
B. Research Techniques.....	94
C. Research Tools.....	101
D. The Behavior of the Museum Visitor.....	111
E. Museum Survey.....	133
Footnotes.....	135

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prepared by
Michael Lawrence Elliott

To be bound on
narrow edge

In the process of way-finding, the strategic link is the environmental image, the generalized mental picture of the exterior physical world that is held by an individual. This image is the product both of immediate sensation and of the memory of past action. The need to recognize and pattern our surroundings is so crucial, and has such long roots in the past, that this image has wide practical and emotional importance to the individual.

Obviously a clear image enables one to move about easily and quickly. But an ordered environment can do more than this; it may serve as a broad frame of reference, an organizer of activity or belief or knowledge... Like any good framework, such a structure gives the individual a possibility of choice and a starting-point for the acquisition of further information.

Kevin Lynch
Image of the City

Chapter 1
Background and Summary

Right--left, right--left: the gaze of a young woman constantly shifts from one wall to the other as she proceeds down the hall. Not very unusual, except for the fact that nothing hangs on the right wall! Looking for a way out of the museum, this girl had ceased to see what was around her.

XXXXXXXXXXXXXXXXXXXX

Heading up the Huntington staircase, the 25-year-old male looks only vaguely to either side as he passes through the Rotunda. He has been here often and has come with a definite purpose in mind: to see the Impressionist and Expressionist Collections. Having done this, he proceeds back towards the Huntington entrance. Upon re-entering the Rotunda, however, he veers to the right and enters the Asian Collection he previously passed up.

XXXXXXXXXXXXXXXXXXXX

A middle-aged man and woman look carefully at the map that rests on the table in front of them. Having decided to visit the American Painting Section, they set out from the cafeteria. Trying to get their bearings in the crypt, they again check the map. To no avail, for they end up in American Silver. Confused, they ask a guard for directions.

XXXXXXXXXXXXXXXXXXXX

Three unique individuals--carrying with them different needs and different resources to meet those needs, they evidence the complexity of providing information to the visitors of an institution like the Museum of Fine Arts. It is a complexity borne of the Museum's very nature--a nature which is based on the notion of a public institution seeking to attract a wide selection of visitors from a public with a wide variety of attitudes toward art.

Yet, the complexity is not based solely on the diversity of its visitors. In many ways, it is implicit in the organization of the Museum itself as a large institution and a richly varied collection of art. If the museum was smaller, or if its structure was more legible, the problem of providing guidance information to visitors would be eased. When a man is at home in

an environment, his need for consciously arrayed information is lessened: his "environmental image" is sufficiently clear to carry him through the situation.

The Museum, however, cannot be anything but complex. Nor should it be, for from the quality and diversity of its art collection the Museum has gained its strength. Yet the problem remains: given the situation, how might the Museum alleviate it?

This report addresses a series of linked issues: How might the museum be made more understandable to the thousands of people who visit it every week? What are the likely benefits of this increased understandability? Are they worth the costs? Analysis of these issues has been conducted on four planes: the nature of the visitors to the Museum, the patterns of movements they generate and how these patterns are generated, the information needs of the visitor given these patterns, and the possible alternative courses of action open to the museum staff.

1. The Nature of the Museum Visitors:

Who are the visitors to the museum? Are there any important sociological similarities/differences? Where do they arrive from? Why do they come?

Information was obtained from previous research done at the museum and elsewhere. In general, the pattern that emerges is one in which the aggregated characteristics of the museum visitors includes being female, young, highly educated, and highly interested in art.

2. The Patterns of Movement: What

are the factors that control movement? What are the processes by which these factors get transformed into decisions to act? Are there any distinct patterns of use? Do different users have different patterns? How much of movement is micro-dependent (an immediate response to a situation) as opposed to macro-dependent (a planned decision based on conscious considerations)?

To get at these considerations, a method of research known as behavioral tracking was employed. Simply put, it records detailed information about a visitor's behavior during his entire tour of the museum. From this, movement patterns and decision patterns emerge. The author feels that movement within the museum is the result of four factors: the pre-conceptions and

inclinations a person carries into the museum with him, the effect of other people with whom he tours the museum, the architecture of the building (visual connections, adjacencies, and internal obstacles) as well as the layout and display of the galleries within the museum setting, and the information system available to the user concerning opportunities, architecture, layout, and display. Of these factors, the preconceptions and previous experience of the visitor seem to have the strongest effect in influencing patterns of use.

3. Information Needs of Visitors:

In what ways might the individual's decision process be aided? Where is information needed? In what form would it be provided?

Again, tracking, coupled with interviews and specially prepared maps, served as the research methods. The maps were designed to elicit the "environmental image" of the visitors. In general, this phase of the work showed that visitors prefer information based on collections to that based on architecture or on individual galleries. It also strongly indicated that maps carried around during the visit are limited in their potential impact.

4. Possible Alternatives: Of the

four factors that influence movement and decision patterns, the two that are under the museum's direct control (namely: architecture with layout and information services) have been analyzed in terms of their ability to help the visitor come to a practical understanding of movement within the museum. Criteria for such an analysis and alternatives were also generated. In general, the recommendations emphasize information services as having the greatest potential impact, and argue that these services should take the form of an extensive orientation center, built-in maps coupled with carried maps, and the coding of local areas by color for easy visitor identification.

The design program is the single way in which research is done to gain behavioral and demographic data and to articulate the values and priorities of the population to use the physical environment. It cannot conclude that "more research" is needed: it has to be finite, bounded, and directly useful. It has to choose particular numbers and to give reasons for doing so... The design program has to be self-contained, a working hypothesis about human diversity.

Constance Perin
With Man in Mind: An
Interdisciplinary Prospectus
for Environmental Design

Chapter 2

Recommendations

Having completed the studies noted in the previous chapter, an analysis of possible alternatives was then conducted. It is the purpose of this chapter to recommend courses of action by which the museum might meet the information needs of its visitors. This will be presented by showing the eight information-related questions most frequently asked by visitors, the context in which each question is raised, the considerations that any policy seeking to deal with these needs must reflect, and the possible alternatives associated with each question. The alternatives will then be discussed in terms of the criteria necessary for their effective design. Finally, the recommendations that emerged from this analysis will be presented.

<u>The Visitor's Information Needs</u>	<u>The Context</u>	<u>The Policy Considerations</u>	<u>Possible Alternatives</u>
1. "What kind of art does this museum contain?"	Raised by some first-time visitors as they enter the museum.	The visitor has no information beyond the fact that the museum contains art. A general introduction is needed.	The broad orientation required to answer this question can be dealt with in a visitor information center.
2. "What should I see while here?"	Raised by the casual visitor at the entrance to the museum, at any physical or psychological dead-end, or during rests such as in the restaurant.	A general sense of not knowing what to see next is coupled with a curiosity about the collections within the museum. The question tends to be place-specific for it is followed by "Where is it?" Orientation should be matched to some form of directory/map.	As above, a general information system is needed. Either a map or a visitor information center would serve.
3. "In general, how do I get around the museum?"	Throughout most of the museum a very significant orientation problem exists among the first-time visitors and continuing to a lesser degree among more frequent visitors.	The visitor attempts to organize the museum in some orderly way: by architecture, by collection, or by specific points to name the most important ones.	The visitor information center and a map system can serve to compensate for lack of clarity in the environment, as can changes in the environment itself.
4. "How do I get to point X?"	The most common decision question raised. All visitors at any point can be concerned.	The visitor has a goal and seeks information which can direct that movement.	Maps are a general way to deal with this, while signs and the asking of guards is a more specific way.

<u>The Visitor's Information Needs</u>	<u>The Context</u>	<u>The Policy Considerations</u>	<u>Possible Alternatives</u>
5. "What lies on the path to point X?"	Again: all visitors at any point may ask this question, though the purposeful visitor tends to be less path oriented and more goal oriented.	The visitor sets a goal and then either chooses the most interesting path to follow or the shortest path. If the latter, he may still want to note what is on the shortest path.	A map system can be complete enough to provide all this information.
6. "Where am I now?"	A constant, predominantly subliminal, question raised by all visitors not familiar with the environment.	Knowing your own location is basic to any process of orientation and way-finding. The question is rarely raised consciously unless a decision is to be made. The museum can provide answers in terms of identifying the gallery or collection the visitor is in, or in terms of the visitor's physical location within the museum.	The establishment of cues in the environment can be very effective, especially when coupled to a carried map. Permanent maps can also pinpoint a person precisely.
7. "Am I still on path?"	Any visitor seeking a specific location.	Difficult, confusing paths must be constantly checked to prevent side-tracking.	Carried maps and guards are the most reliable. Signs and permanent maps, if properly located, are also quite effective.
8. "What's over there?"	Any visitor standing adjacent to an unfamiliar environment. This is especially true of a visitor prone to wandering.	Curiosity about nearby (and unknown) places. Attention of visitor can be raised by an environment that is novel, intense, sensuous, or complex.	Environmental cues can be manipulated to attract attention. Maps and signs give answers to this question, as does exploration.

Criteria for Devices Used to Inform the Visitor

Maps, lists, signs, directories, and to some extent, guards giving directions--each is considered to be a general information source geared at answering specific questions that visitors have.

Based on the studies conducted, the following criteria were developed for any such device:

1. It should be reachable by a visitor seeking information at the time he needs it.
2. It should serve to orient the visitor in space and to help him locate those points within the museum that he desires to find.
3. It should encourage the visitor to form a coherent image of the MFA, thereby giving him a framework within which he can more knowledgeably deal with the museum.
4. It should be simple to understand and serve to reduce an overload of information.
5. It should be designed as part of a total system of information. Each element of that system should reinforce the others.
6. It should be placed so that it is not in competition with other things for attention.
7. It should be adaptable to changes within the museum. And,

8. It should reflect the priority of needs that the visitor carries into the museum with him.

In addition to these general criteria,

9. A map should provide a simple directory of the available collections and visitor services within the museum. And,

10. A map should be reversible. Given a destination, the visitor should be able to find it on the map. Given a point on the map, he should be able to determine what is located there.

Criteria for Devices Used to Educate the Visitor

Visitor information centers, tours, and to a certain extent maps can each be viewed in two ways. They are sources of information, but at the same time, they try to open up new possibilities to the visitor and to encourage more enjoyable, knowledgeable, and fulfilling visits. As such they are also education devices. Each such device should be developed with attention given to the following criteria:

1. It should give a simple, yet vivid, idea of what the museum has to offer.
2. It should encourage diverse and responsive interaction with the museum and open opportunities to the visitor.
3. The location within the museum of everything referred to in an orientation device should be clearly indicated.
4. It should encourage the visitor to form a coherent image of the MFA, thereby giving him a framework within which he can more freely interact with the museum.
5. Such orientation devices should be reachable by any visitor near the start of his tour of the museum.
6. It should be engaging to a passer-by and hold attention once it attracts a visitor.
7. It should be functionally separated from activities in which they will be in competition for attention.
8. It should be adaptable to changes within the museum.
9. Each device should be flexible in terms of the time needed for the device to be useful to the visitor. And, finally,
10. It should also be capable of providing for individualized uses.

Criteria for Re-shaping the Environment

Re-shaping the environment can be an extremely effective way of providing information. The best kind of information is that which answers the question before it is consciously raised. This gives the visitor a sense of confidence, a sense of being able to tour the museum with ease. Criteria by which this can be at least partially achieved are as follows:

1. Collections should be internally cohesive and internally centered. They should be perceivable as single units. Where collections are on two floors, the verticality of the arrangement should be exaggerated.
2. Edges between each collection, and between collections and other functions, should be clear and strong. Some type of transition should exist, though visual and physical connections should not be impaired.
3. Paths should be clear and continuous, with few branchings and a minimum of ambiguity.
4. Nodes, such as stairwells, entrances, and rotundas, should be exaggerated and made visually prominent. Accessibility to and through these areas should be simplified.

5. Landmarks, like nodes, should have high visibility. This is particularly important for orientation. And,

6. The smaller the structural impact on the museum, the more feasible the alternative.

Recommendations:

The essential last link of this analysis lies in the recommendations--the physical design of the criteria suggested. The suggestions are extensive, and in the short run are beyond what the Museum is likely to find feasible. They are therefore given in the order of both urgency and effective impact. For easy accessibility, a more complete discussion of each recommendation has been indexed.

1. The museum's visual communication p 69
and information should be integrated into a total system based on the coding of each collection and the visitor services with a distinct color. That color would be used on

all maps to refer to each section, and would be prominently displayed on the jamb of each doorway within a section. The contents of each gallery and the gallery number would also be displayed on each jamb.

2. A Visitor Information Center should p 75-78
be established. It should consist of two parts, the major portion being in the Crypt area with a secondary extension located in the Rotunda area. The Crypt area should have five elements: a slide show of pieces from the museum's collection projected in such a way as to inform the viewer of its location; a permanent set of maps arranged vertically, coded by color, and containing an extensive directory of galleries and frequently sought pieces; a list of events and notices; an information desk; and places to sit, music to hear, and possibly even food to eat. The secondary information center should consist of permanent maps coupled with

select pieces from each collection, all of which should be displayed on a large outline of a plan of the museum. The outline should be laid out on the floor, and each piece placed on that part of the outline that corresponds to their true location. Their pedestals should be colored using the coding system developed, with the floor number of each piece prominently displayed.

3. Permanent maps should be developed as part of the total information system. It should be based on collections and use the coding developed. There should be one on each floor near each stairwell. Each location should provide general information about the entire museum and specific information about the collection within which it rests. The area within which the maps rest should be painted the color originally coded for visitor services and should not contain art exhibits. p 70

4. Signs should be reserved for high priority information. Each sign should be placed so that no more than one other sign is needed to reach the objective. All signs should be uniformly designed. p 71

5. Guards should be required to know the location of the most sought after works of art. They should further be encouraged to give directions in terms of the image the maps seek to create. It should also be made clear to visitors that guards are there to help them. p 71

6. The employees' and visitors' parking lots should be reversed, and visitors directed into the Huntington Avenue entrance. p 79

7. Written tours should be provided in pamphlet form, each pamphlet covering a different collection and one pamphlet for the museum in general. p 79-80

8. The corridors that connect the Fenway and Huntington Entrances should be made p 81-82

more clear. Signs which designate the VIC, as well and the VIC itself, should be used to tie these corridors together.

9. The collections should be consolidated both horizontally by means of adjacent galleries and vertically by centering collections around stairwells. To accomplish this the American Paintings and the Print Collections should be reversed and the American Decorative Arts on the first floor should be consolidated around the north stairwell in Section C. p 83

10. The Garden Court should be given greater clarity with additional and more prominent views from inside the museum. The collections located in Section D. should be placed in the rooms with views of the garden. The windows that were bricked up in gallery 1C10 should be re-opened. The balconies on either side of the Tapestry Room should also be re-opened to the public during the warmer p 83-86

seasons. The windows in the second floor Decorative Arts sections and in gallery 2W02 should be lowered. Gallery 2D07 should be made a part of 2D06. The resulting gallery, together with 1D06, 1B37, and 2B37 should contain prominent, protruding windows, possibly with a small rest area and information attached to these windows. Furthermore, the door between 2B36 and 2B37 should be enlarged to emphasize the window in 2B37 throughout the Egyptian gallery. Art objects should be removed from in front of windows where possible. Finally, the actual design of the windows should reflect both the manner in which people will look through them and the collections within which they rest.

11. Lastly, each of the four minor staircases should be made visually prominent, with the visual connections between floors being exaggerated. To accomplish this, the elevator near C33 should be removed, leaving a larger p 86-88

opening between the three floors. The other three stairwells should be expanded to include half levels which would house a few exhibits as well as a set of permanent maps.

It is clear that the particular distribution of the various degrees of interest and the average interest in entire museums or portions of museums has a dual determination. On the one hand, these measures of interest are determined by the nature of the public the museum draws as visitors. On the other hand, the size, methods of display, and other intrinsic characteristics of the museum will determine the amount and distribution of interest. In consequence of this, inter-museum comparisons are extremely difficult to make without error, since neither one of the two important factors can ever be held exactly constant.

Arthur Melton
Problems of Installation
in Museums of Art

Chapter 3
The Visitor Within the MFA:
Identity and Characteristics

The nature of the public the museum attracts and the intrinsic characteristics of the museum are two factors which serve as important determinants of the collective behavior of museum visitors. It therefore seems appropriate to analyze these factors both in search of useful data for our own analysis and with the hope that other museums, knowing the qualities that make them different from the Boston Museum of Fine Arts, might find this document useful for their own planning.

The first factor to be analyzed is the nature of the visitors who come to the museum. Based on a study of 702 visitors conducted by Michael C'Hare¹ of the Museum's Planning Department, the in-season (September through May) visitor can be described in terms of demographics, motivation for coming to the museum, behavior while in the museum, and reactions to the museum.

Demographics: It should be noted at this point that this information is based only on visitors who are self-directed (adults, with or without accompanying children, who are not in organized groups). This is not only true of this study, but also of the four other studies referred to in this report. Organized groups, although interesting, require a rather different analysis than the ones presented.

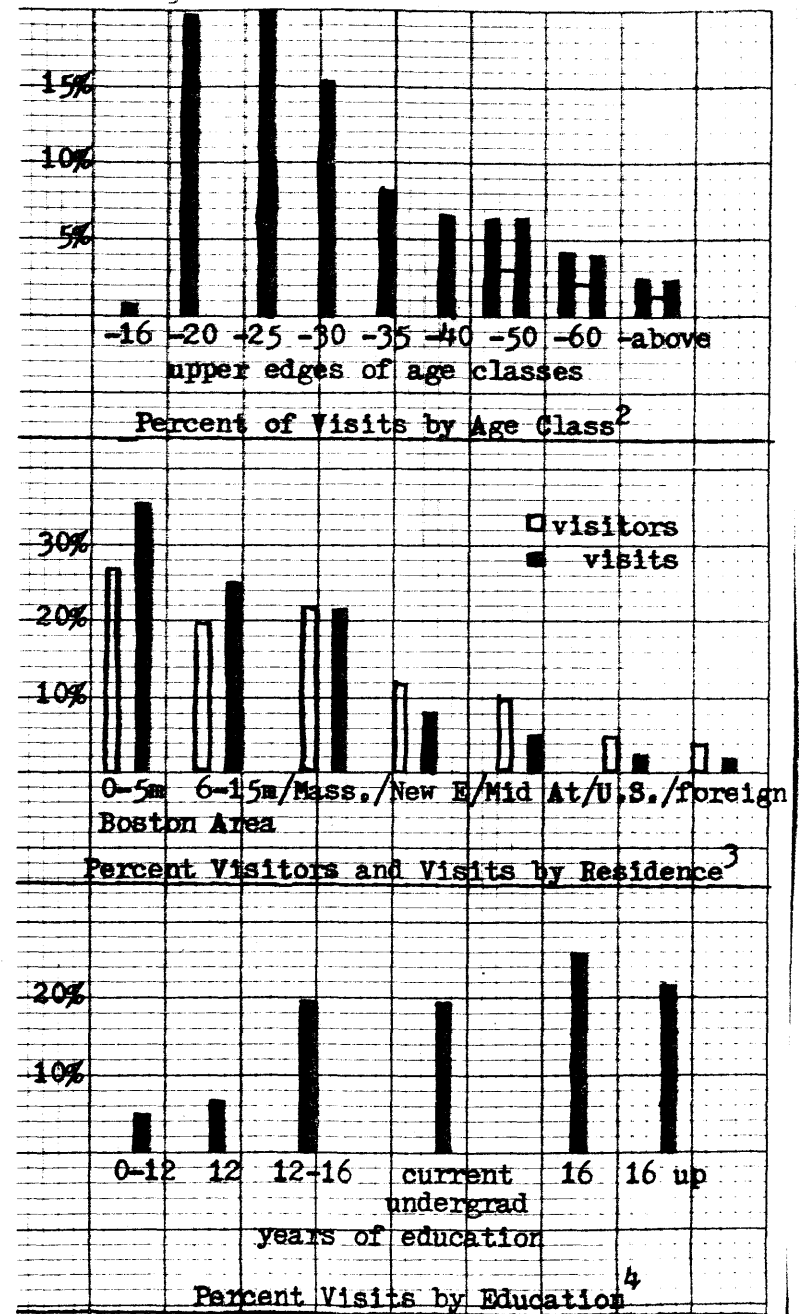
The population is predominantly young, with a mean age of 27.

It is also predominantly female (59.4%) and white (96.3%).

The museum must be considered a regional museum, with Massachusetts, the other New England states, and the Middle Atlantic states each contributing significantly to the number of visitors who visit the museum each year.

Its visitors are also highly educated, with 87.1% of the visits being made by people with education beyond the high school level.

By far, students account for the largest occupational class of visitors as well as visits (29.5% and 31.3%).



Motivation: Why people visit the museum

can be seen here:

A full 46.7% of the visits are conducted by people who consider themselves professionals or serious amateurs in the art related fields. If you add those who have some form of art as a hobby, the percentage increases to 59.9%.

Almost 80% of the visits are conducted for the purpose of visiting the art collection.

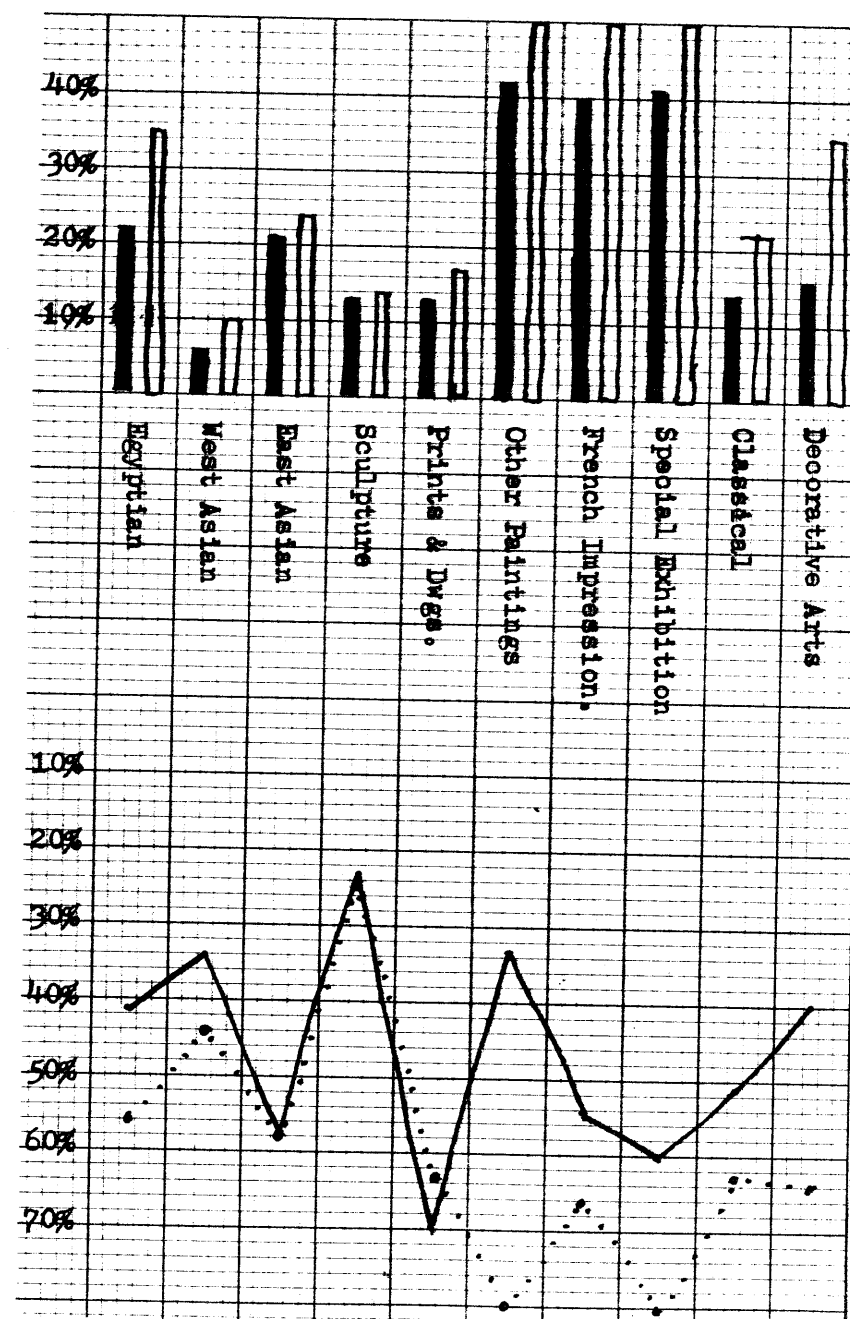
Finally, looking at the collections visited, a heavy emphasis on special collections and paintings emerges.

Purpose for Visiting (in Percent)⁵

Lunch, Tea	1.6
art class	3.7
lecture, movie	4.7
research library	6.6
specific galleries	16.1
collection in general	40.4
special exhibitions	22.8

Destinations⁶
(percent)

intended to visit	■
visited	□
intended to visit and knew location	—
intended to visit and did visit



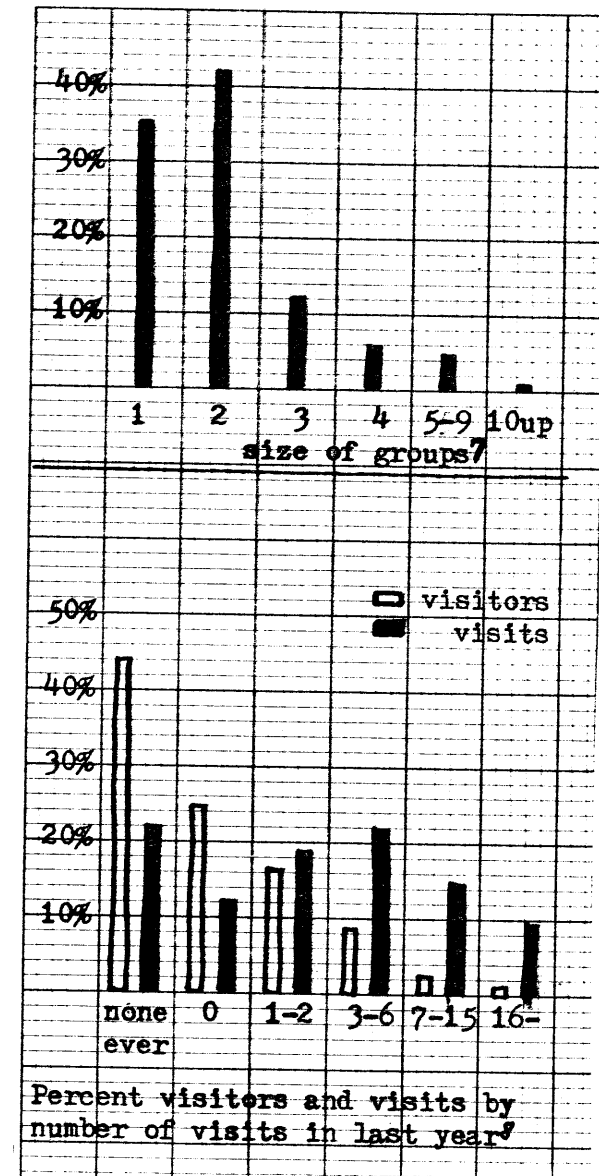
Behavior: The third area of analysis

is the behavior of visitors in relationship to getting to the museum and to using its facilities.

First, the two entrances are equally used, with the Fenway entrance receiving 52% of the visitors. This is directly related to the parking situation since both the parking lot (in which 40% of the drivers park) and the Fenway street parking feed into this entrance. With 63.7% of the visits to the museum being made by car as compared to 20.5% using public transit and 11.8% walking, this factor becomes significant.

The number of people who arrive together tends to be small.

The effect of the number of visits per visitor and the number of visitors can be shown. Note that almost half of the visitors are first time visitors. This implies that many visitors never return. This finding holds true even for those visitors who consider themselves amateur or professional artists.



Reactions: Reactions to parts of the museum were taken before a visitor left. The most significant results for our purposes can be found in the two services most often requested: better directions (24.3% of visits; 32.7% of visitors) and greater comfort (17.6% of visits; 18.7% of visitors). A further important reaction is the percentage of people who did not see all they wanted to see. Of the visitors who came to the museum, 56% of them expressed this viewpoint.

The Visitor: Problems and Potentialities:

There are several important implications of the data worth noting. We are dealing, it would appear, with a young, highly educated group of visitors who have come from a large part of the New England area. There is a high degree of serious interest in art, particularly among those who visit often. Yet, at the same time, many

visitors rarely or never return.

More importantly, however, the museum's use pattern and the entrance condition have direct implications on the study conducted. Visitors fall into three general categories: an unknown number of people who come in groups through the staff entrance; the 11.3% of the visitors surveyed who come to do research, hear a lecture, or go to a class; and the others who come to see one or more of the art galleries. Since the study concerns itself with information and the question of the museum's understandability, the first two groups, both of whose members' movements are directed rigidly by their goals, were ignored in favor of the third group of self-directed visitors.

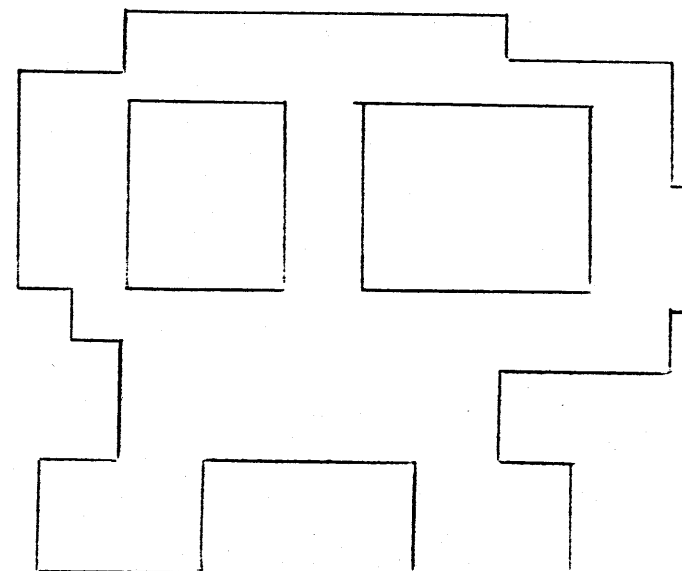
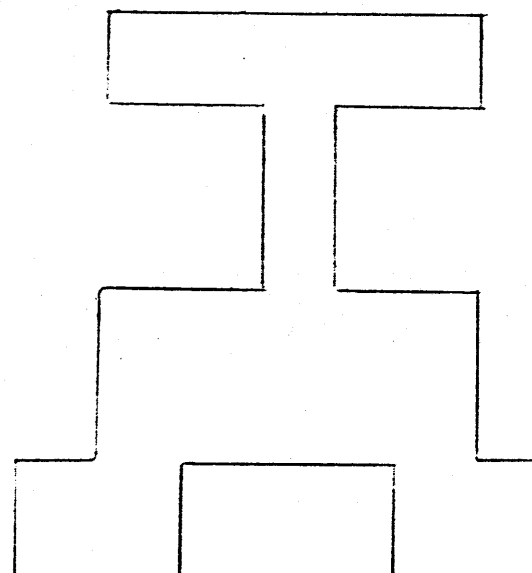
The second implication has to do with method of subject selection. Given the almost 50-50 division of arrivals at each entrance, a random selection of visitors at both doors

served to give the most balanced picture of movement within the museum as a whole. With this in mind, the basic research techniques were developed.

The Museum Structure and Its Implications:

The second factor to be analyzed is the museum itself. As originally conceived, the museum was a two-floored, H-shaped building, the first floor being devoted to offices and study collections and the second floor containing most of the art works and the best collections. As the museum grew, more of the first floor was used for public gallery space. The addition of two new wings further expanded the capacity of the museum, but at the same time it also complicated its movement patterns.

This historic development has had four effects on today's museum. First, the original design was clear cut: from a given



area (the Rotunda) most of the museum's collection branched out with the collection well matched with the architecture. This has since dissolved into ambiguity. No longer is the structure of the museum obvious.

Second, the new additions which created more space to fill new and old departments' space needs also added to the complexity of the physical layout. This greatly increased not only the options to the museum visitor, but the number of decision/confusion points as well.

The third effect can be seen in the current architectural arrangement of collections. Space on the second floor, being a scarce resource, had to be augmented by space on the first floor. Until new sections of the museum were added, there existed a clear vertical connection between parts of a collection centered around one staircase each. The new additions make this vertical alignment

less clear.

Finally, a very concrete shift in the architectural conception of the building has taken place. The original H-shape, with one north-south corridor and two east-west corridors has given way to a present arrangement in which the imageability of a central corridor now competes with that of two side corridors. Perhaps the most concrete image that remains does not even lie within the museum's walls, but rather in the two courts created by the additions. This competing imageability, coupled with an increase in ambiguity, more complex visitor decisions, and the development of vertical alignment are the major problems that have developed through past expansion of the museum.

In order to design for movement, a whole new system of conceptualizing must be undertaken. Our present systems of design and planning are inevitably limited to our techniques of conceptualizing and our methods of symbolizing ideas. We know only how to delineate static objects, and so that is all we do... Since we have no techniques for describing the activity that occurs with spaces or within buildings, we cannot adequately plan for it, and the activity comes, in a sense, as a by product after the fact.

Laurence Halprin
Cities

Chapter 4
The Visitor Within the MFA:
Patterns of Movement

The Boston Museum of Fine Arts

currently has more than 150 public art galleries and service areas connected by more than two dozen corridors and staircases--a complex environment that is dealt with weekly by thousands of people, most of whom are at least partially unfamiliar with it. How do these visitors deal with this complexity? Are they comfortable with it? These are important questions, but ones which, for the most part, have not been dealt with.

To state these questions in more analyzable terms: In what manner does a visitor move through the museum? Is he able to do so without supplementary information? Are there patterns to the movement? Identifiable decision points? Is there any stress involved in making/avoiding decisions to move into unknown areas?

The basic issue is to identify movement patterns and the decision process and behavior associated with them. It was theorized that such patterns are conditional on four factors:

1. the pre-conceptions and inclinations people carry into the museum with them,
2. the effect of other people with whom a visitor tours the museum,
3. the architecture (especially its symbolic qualities which assign a level of importance to spaces) together with the layout and display of the galleries and collections within the museum setting, and
4. the information system available to users concerning the opportunities, architecture, layout, and display.

Using this theory as a basis, a behavioral study of visitor movement patterns was conducted to determine the relative importance of each factor. Twenty-two subjects, eight from the summer and fourteen from the month of November, were interviewed for pertinent background data and then

observed during their entire tour with all movement and behavior recorded (see Appendices B and D).

The data that evolved out of this study is in several forms. For the most part it is very fine grain, giving a detailed picture of how individual visitors react to the museum setting. Yet fine grained behavior frequently repeats itself until patterns can be differentiated. The following draws attention to these patterns.

1. Movement Patterns Due to the Preconceptions and Inclinations of the Visitor

As was mentioned, each of the four factors which may be affecting movement should have an effect on any observed pattern. In the study done, the results frequently do show a mixture of influences. However, patterns stand out most clearly when they are developed using the visitor's pre-inclinations as the main variable.

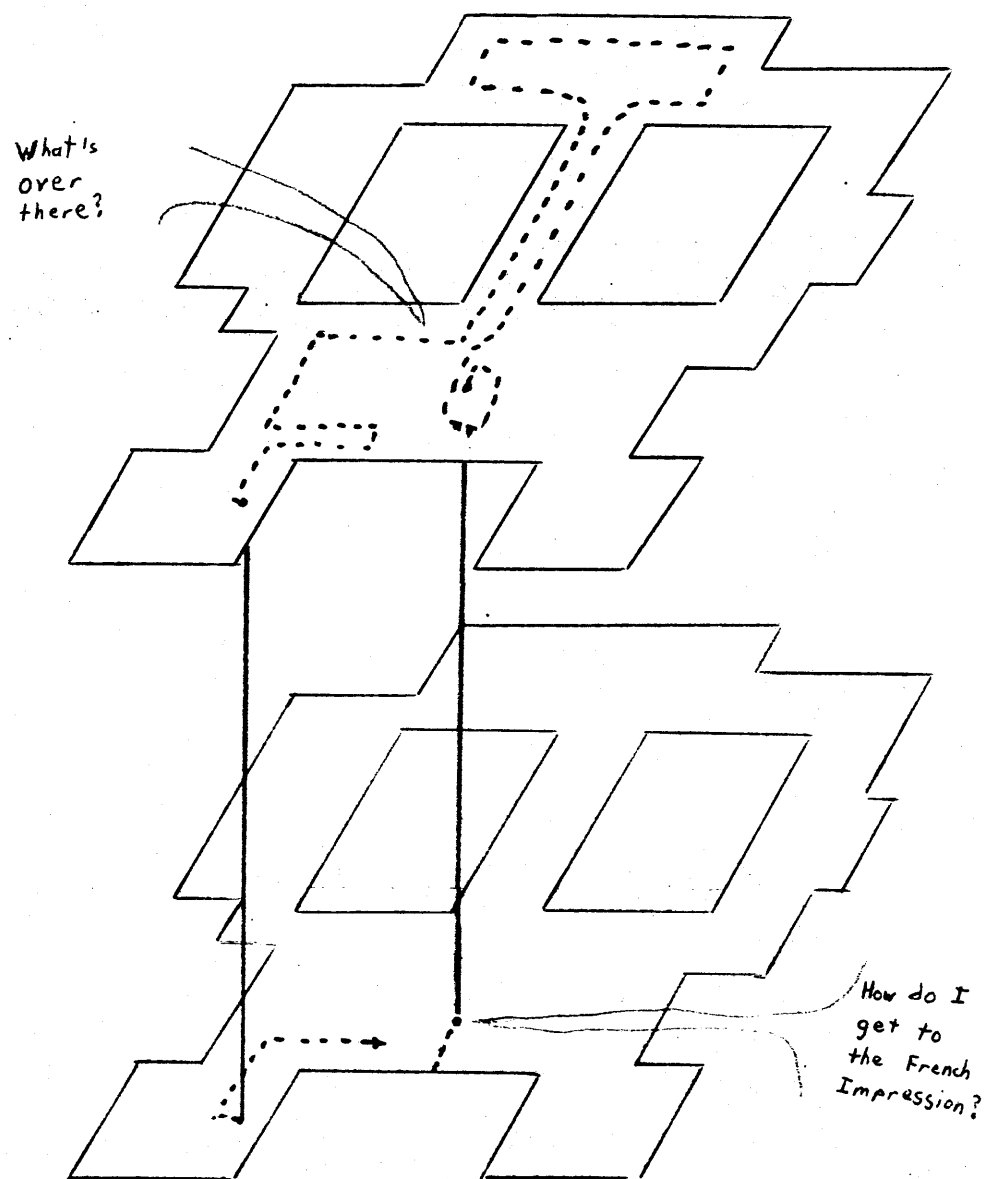
Unlike the other three factors, degree of pre-inclination generates a simple scale of results based on three (and only three) distinct patterns depending upon whether the visitor is purposeful (knows fairly well what specific galleries he would like to visit), casual (would like to see the collection in general, with no single purpose), or has mixed motives (would like to see one specific gallery, then anything else, or would like to see the entire collection with the distinct purpose of discovering what the best exhibits are for future visits).

Most visitors to the museum have a strong idea of what they would like to see. Fourteen of the twenty-two studied visited those exhibits for which they originally indicated a preference, and, aside from perhaps one other exhibit, they restricted their interest to only those indicated. This

includes all eight of the visitors who have been to the museum ten or more times.

The galleries to which a purposeful visitor goes tends to consistently be the best known and most popular of the museum. This is especially true of those six visitors who come only infrequently (less than four previous visits), yet still have a clear idea of what they would like to see. The galleries to which they invariably planned to go are the special exhibits, the painting collection and/or the Asian collection. The more frequent visitors tended to add prints, American artists, and the Egyptian collection to their tour. For the most part, this reflects a pattern of incremental exploration: if attracted into a gallery on a previous visit, the frequent visitor is more prone to re-visit it on a later one..

Another characteristic of the purposeful visitor is the fact that eleven of the

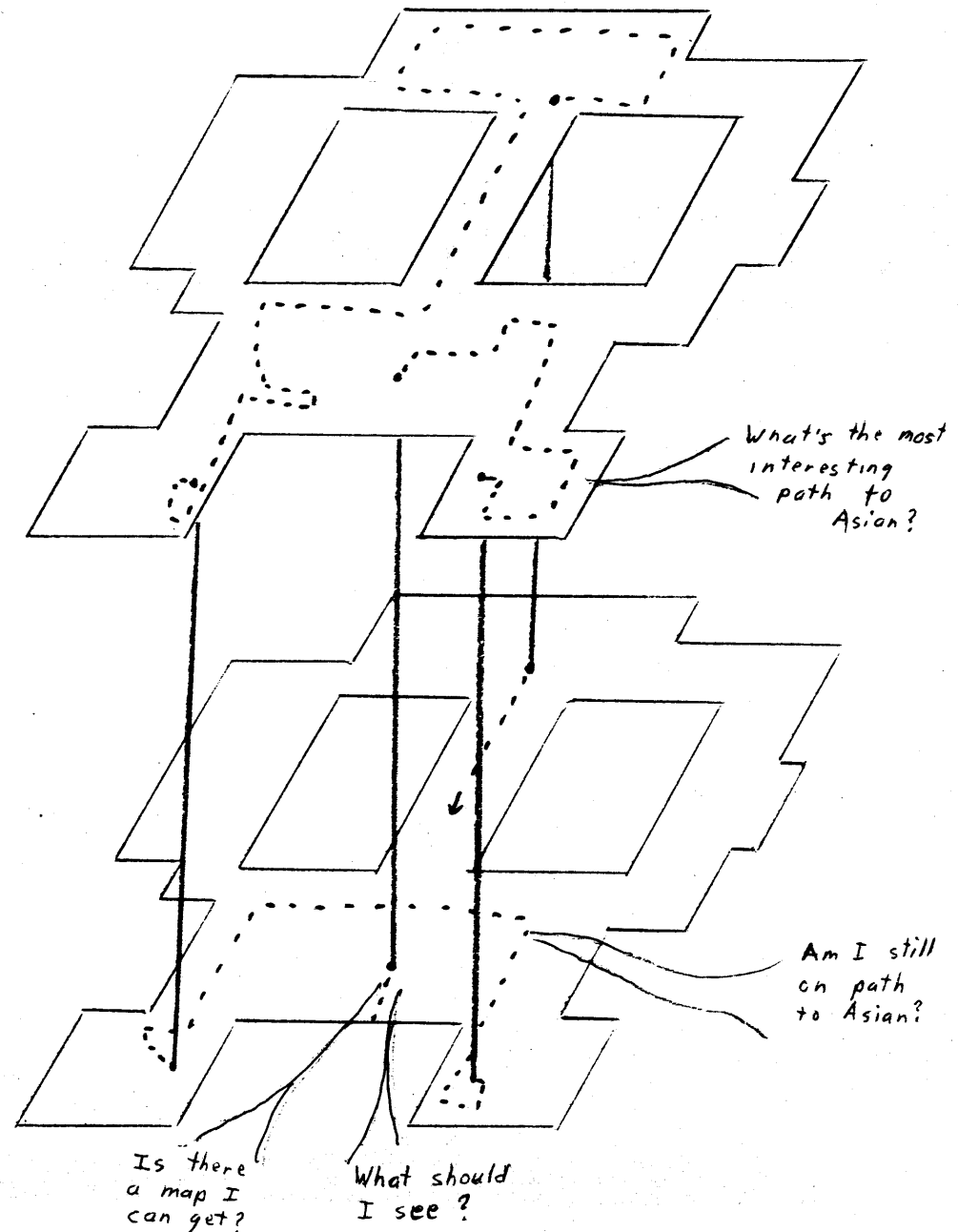


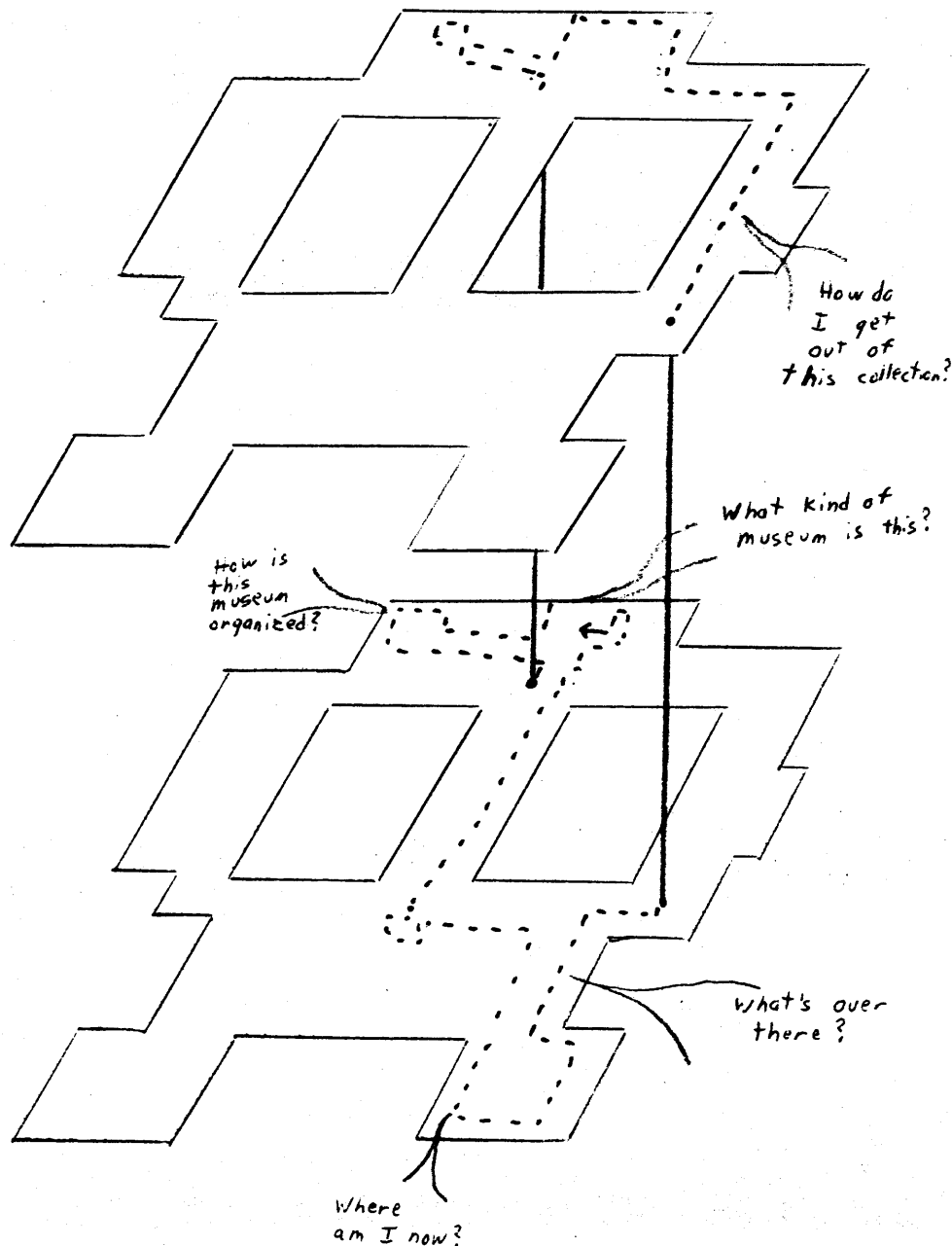
fourteen did not use any map while there (this includes five of the six infrequent users). Perhaps because they have specific destinations, their tendency was to rely on the verbal directions of guards when in doubt. In all, a pattern of use develops in which the purposeful visitor comes to see two or three specific collections and sees them. He then may or may not see one additional gallery. If he does, it is likely to be one that is visually adjacent to a spot on his original tour. In this way, as two visitors have stated to be their own experience, the person who comes frequently gradually explores the museum.

A visitor who both plans one specific facet of his museum stay and who also desires to visit some unspecified section proves to have a very different approach to the museum. He uses information wherever possible: carrying and studying maps, stopping to read

signs, and trying to make visual connections with each gallery he passes. He also spends more time in the museum than members of either other group and is very diverse in his interests. The pattern reflects these points: the visitor sees what he has particular interest in first, and then proceeds to another gallery by studying a map or by looking into various galleries--in short, a very "rational", decision-based approach. It should be noted, however, that three of the four visitors in this group are experienced museum-goers from outside of Boston and each has the particular purpose of finding out what the museum has to offer in terms of resources.

The third type of pattern is generated by the visitor who enters the museum with no further desire than "seeing" the museum. These four visitors are not motivated by particular goals or particular knowledge of art; rather,





they seek to get a sense of "what the museum is".

Robert Weiss, in his study of pavilions at the Seattle World's Fair, noticed a similar behavior:

Most observations that have been made are compatible with the assumption that visitors to a hall are less concerned with seeing all the exhibits within the hall than they are with getting something less specific, a sense of having experienced what the hall has to offer... In line with this assumption, it has been found that visitors to a hall tend to adopt a route through the hall which leads them to the exhibits they conceive of as "must-see" exhibits (exhibits which, if missed, would make them feel they had not seen something important to the hall), but skip exhibits not on the route from entrances to exits, and avoid routes which would require them to circle throughout the hall.⁹

Extrapolating into the larger setting of the museum, one would expect people so motivated to cover large sections of the museum. This is exactly what we find: each visitor covered a large area, using any source of information available in order to keep going through new sections. Three of the four tried to use a map; each found it too confusing. They

generally stopped only briefly in front of many different pieces. Two of the four seemed to be relatively at ease with this situation, though the frequent back-tracking and retracing they went through seemed at least partly disconcerting. The other two seemed to be totally confused and frustrated by a museum (and its map) that made little sense, later articulating this unease to the observer.

Diversion--An Analysis of Movement Patterns
Due to the Inclination of the Visitor

Before continuing with the other three factors, it seems timely to clarify some issues implicitly associated with this analysis. For instance, the low level of map usage is at least partly related to the fact that the particular map available at the time the project was performed was not very useful to most visitors. Their difficulties are actually one of the motivations for this study. Thus,

low map usage at this time cannot be considered indicative of visitor attitudes towards maps in general.

An even more important consideration is that there is no value judgement implied by the scale constructed. The purposeful is not "better" than the totally uninitiated in art. They are merely two different members of the public to which the museum opens its doors, each with his own needs.

This problem, however, becomes more subtle when one shifts the analysis to the "visitor vs. visits" realm. By this I mean: does a person who comes more frequently warrant proportionally more consideration? To show the effect this consideration might have on this analysis, the previously cited survey data¹⁰ was used to weight the "pre-inclination" factor from visits (the research project selected subjects according to visits) to

visitors (thus giving frequent and infrequent visitors an equal chance of selection).

This was accomplished by taking each visitor's number of visits in the last year and matching this to the proportion of visitors throughout the museum that fall into the same category divided by the proportion of visits in the same category. Using this new proportion, each "visitor" was weighted so as to have an equal chance of selection.

Before weighting, the ratio of purposeful visitors to mixed to casual is seven to two to two. After weighting, it is seven to four to six. Thus if each visitor, independent of how many times he enters the museum, is considered absolutely equivalent to all other visitors, the group of those who are not purposeful comes out to be larger than those who are. To put it another way: whereas most visits are done by people who do have strong pre-inclinations,

most visitors are people who do not have such pre-inclinations.

This analysis is not meant to suggest that any of the three groups deserve special consideration because they have more members. Rather, it is meant to show that each of these three classes contains a significant number of the museum's self-directed adults. Each class therefore deserves consideration by those who design an information system.

One way in which the differences between each class of visitors might be made more clear is to visualize similar situations in which such people might find themselves. For instance, one analogy might be that the purposeful visitor uses the museum as a federation of different museums (going to only one unless the publicity of another attracts him in) or sees it much as he would a dinner party in which he spends most of his time with

close friends; the visitor with mixed motives uses it as a newly bought encyclopedia (checking those things of particular interest to him and skimming the rest to find out what is available) or as an experience similar to an evening party in which he knows most of the guests casually and a few closely; and the casual visitor can be likened to a visitor to a new and foreign city or to Disney World (he is looking, not for details, but for the spirit and excitement that ties the place together, a sense of what it is that makes the place unique), similar perhaps to a cocktail party where a person can meet many new people on a casual basis. All these experiences are unique in some ways, similar in others. Each museum and party requires varying reactions and answers to different questions. Any policy recommendation must recognize these separate experiences, just as social convention must reflect the different party situations.

2. Movement Patterns and Other People

As the visitor population characteristics made clear, 65% of all visitors tour the museum with other people. Of these, virtually all (excluding only 12%) either come in pairs or in groups of three. Thus, for a substantial number of visitors, there exists a second factor which should affect their movement pattern, namely: the effect of having two or more people create the pattern together instead of one person moving alone.

Arthur Melton proposes what might be considered the fundamental shift in behavior: "when two people go to a museum together the behavior of each one is shifted toward the average for the two."¹¹ This implies that one visitor is more interested in a given collection (or art in general) than the other, though it does not imply that it is always the same one that is more interested. In either case,

however, the process that encourages each to converge on the average is by no means perfect. One visitor is frequently finished with a gallery before the other. This additional time is frequently put into behavior which tends to make the movement patterns of two or three people more constantly changing than that of one person. If there is information available, the person who finished first is likely to scan it; if not, he is likely to engage in a movement that could be called exploration: briefly checking out different galleries. Such a pair responds more actively to what is available than a single person might.

Even beyond this particular behavior, the basic nature of two people making decisions seems to encourage the seeking and use of information. Decisions as to what will be done must often be made verbally, and preferences must be made explicit if two people are to come to

agreement. To the extent that this proves true, information becomes all the more useful. In actuality, this pattern did exist in the visitors observed.

3. Movement Patterns Within the Museum Setting

There remains two areas of analysis: the architecture of the museum with the layout and display of galleries, and the information system. Each of these has a marked effect on the movement patterns of a visitor. The architecture does this through its symbolic qualities which assign a level of importance to spaces, by its spatial organization (the size and shapes of spaces, as well as their relationship to each other), by the ambiguity or clarity of circulation lines, by the accessibility of places and the existence of internal obstacles, and by the nature of architectural attractions (such as staircases).

In like manner, the way in which collections are placed within the museum has an effect on the movement patterns, since certain popular collections can create common movement paths.

The effects of architecture and layout can be analyzed quite extensively, far beyond our immediate purpose of providing aid to visitors (see Appendix D). However, even within the limitations of this study, there are many striking characteristics associated with the relationship between these factors and information needs. Probably the best example of this lies in the ability of a visitor to cross the width of the Museum. On the first floor the path is indirect and ambiguous. On the second it is straightforward. This is, of course, in keeping with the historic intent which emphasized the second floor over the first.

In general, the current attraction towards the upper level seems to be very high

for both entrances, with over half the visitors studied passing up there immediately after entry. The reason for this is complex: in part it is the architecture of the stairs, but Fenway has a collection box in front of its stairs, and it still seems to function as well as that at Huntington (note, however, that the Fenway entrance is more confusing, and out of a series of choices, the stairs remains the most prominent). Probably of equal or greater importance, though, is the fact that Painting and Special Exhibits are located at the top of each staircase, and each of these has strong drawing power once their presence is known.

What we have at this axis of the museum, then, is an effective match between layout of the collections and architecture. The Tapestry Room connects two rotundas which connect the entrances to the most popular galleries via

staircases. This has potentially important effects on any information system used, since there exists at these points a consistent and strong movement pattern that aids in the formation of a mental image of the museum by the visitor and to which certain types of information can be attached. The reverse is also true: a bad mix between layout and architecture can cause considerable problems. For example, the directory at the Huntington Avenue entrance goes unnoticed by many: the task at hand is to buy a ticket and get in. A typical visitor does not deal with the question of what he will see until after he has finished this preliminary activity. A directory would therefore have more impact tied either to the area inside the entrance, to the rotunda upstairs, or to both.

The rotundas seem to have effect above and beyond the number of people that pass through them. The rotundas, by offering many fairly

clear alternatives, reinforces a situation in which the visitor must make a conscious choice. As it stands now, however, the consequences of choosing an alternative are not clear since the decision is based only on what is seen in the adjacent galleries. This is not true for a series of galleries--here the decision as to where a visitor may go can occur without much thought. He has only a few limited choices, and they can be done quite passively. It is for this reason that shifts from one exhibit to another, especially shifts that allow for as many choices as the rotundas do, are the places that information proves immediately useable.

Yet to say that information belongs predominantly at those places that are rich in imagery and well matched to layout is to only scratch the surface. Looking at the movement patterns that emerged from the study, it is clear that many decisions are made at these

points. It is also clear that much confusion occurs at precisely those points that are not clear and that do not serve as focal points. In fact, if it were not for the ability of many visitors to keep travelling without making long-range decisions, using only their "sense of the place" as guides, then it would be at these very same points of ambiguity that the greatest need for information would occur.

and potentially the most potent--sources of information. In the extreme, it is only when these environmental cues fail--either because they are too complicated for comprehension or too unclear for ordering--that supplementary sources of information are needed. It is the purpose of the next section to deal with this issue of information--both from its environmental level and from its supplementary level.

4. Sources of Information

In the final analysis, it is not only the architecture and the layout that dictate information needs, but also the immediate needs of the individual himself. Architecture and layout aggravate the individual's needs by forcing questions to be raised through ambiguity or alleviating them by answering questions through built-in clarity. For our purposes, it is therefore best to view them as alternative--

The central source of data is people's own evaluation of their sense of competence and objective measures of it, relative to the availability, extent, quality, and placement of environmental resources. The very process of design is, then, to be conceived as a response to the stimuli of human demands: the object in the environment is not lying there waiting for its stimulus properties to take effect upon the person, but instead the person endows the object with various kinds of stimulus properties depending upon the extent to which he can carry out effective behavior that uses the object as a resource.

Constance Perin
With Man in Mind: An
Interdisciplinary Prospectus
for Environmental Design

Chapter 5
The Visitor and the MFA:
Way-finding and Understandability

A person entering the MFA must in some way come to grips with one of the most complex public buildings he is ever likely to visit. It contains, among other things, almost 225 doorways through which the public may pass, each leading to areas which are potentially unique to his experience, and each of which he has an equal right to pass through. In many ways, this becomes a difficult problem of way-finding.

Fundamental to the way-finding process is the ability to understand the environment through which one seeks to move. Only through the consistent use and organization of definite sensory cues from the external environment can a person move freely and purposefully. An environment which has the quality of having easily recognizable parts that can be organized into a coherent pattern is said to be "legible".

In his discussion of "The Image of the Environment,"¹² Kevin Lynch points out that the ability to organize sensory cues is the basis of efficient and pleasurable movement. This organization into an environmental image serves as the framework upon which the experience of the environment is pulled together. For an image to be workable, it must contain three components. It requires first "the identification of an object" as distinct and unique from other objects. Second, the image must be able to structure the object's environment: it must include "the spatial or pattern relation of the object to the observer and to other objects." Finally, the image is based on meaning: if the object has no meaning to the observer, it will not become part of his image.¹³

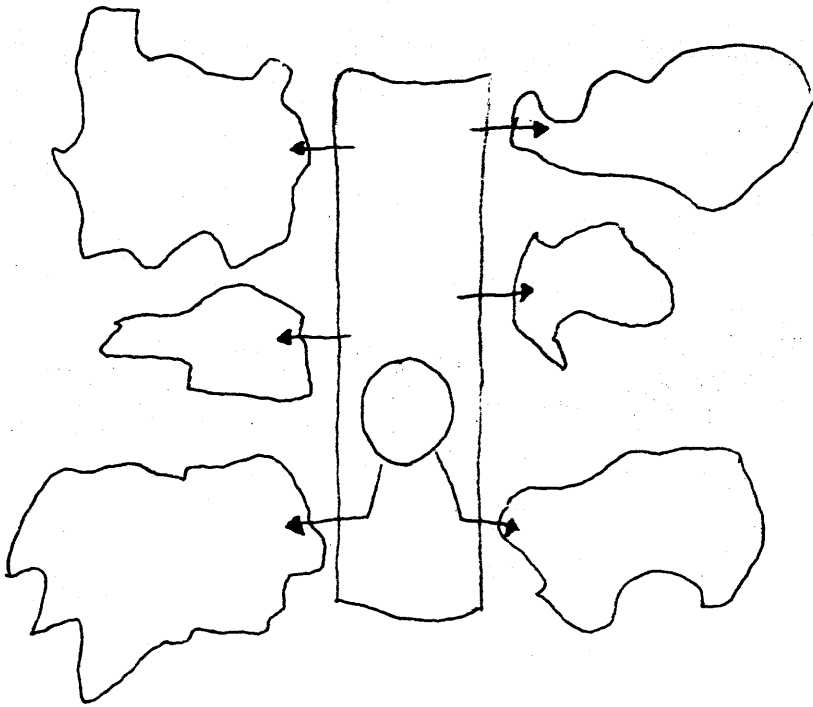
The difficulty of image formation occurs when an environment becomes illegible. Major difficulties which lead to this include

confusions, floating points, weak boundaries, isolations, breaks in continuity, ambiguities, branchings, and lacks of character or differentiation.¹⁴

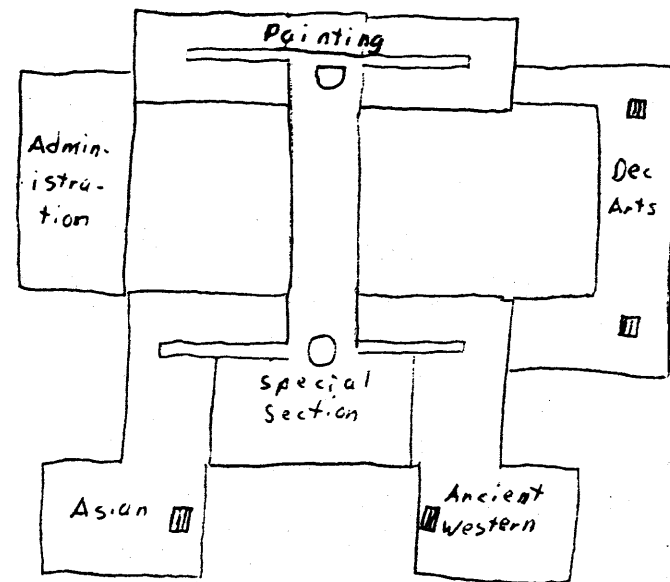
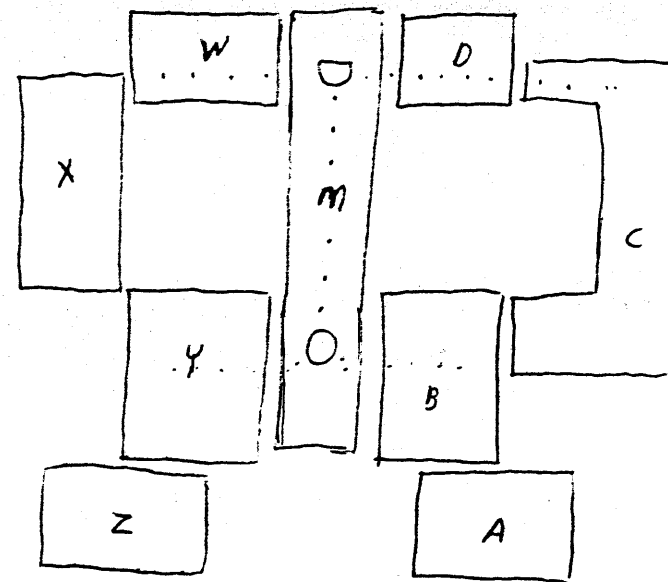
Yet even environments which seem chaotic are able to be patterned, and if forced to deal with such a set of surroundings, a person will seize upon minor clues or will shift his attention from physical appearance to other aspects such as use-location.¹⁵

What, then, are the images that can adequately serve a visitor to the museum? Michael O'Hare, in conjunction with the MFA's map project, proposed two such images. He pointed out that "most visitors will make do with a mental image of Zone M, centered on the rotunda, and flanked by the galleries, and by the courtyards."¹⁶

He goes on to note a second possible image: "The Museum should be considered by



the visitor, and presented to him, as three floors of nine zones each... Ideally, experience with the building and the map system would fix in the visitor's mind a "typical floor plan" of the building consisting of nine zones, vertical circulation, locations (zone "centers"), the rotunda, and possibly the corridor system linking these centers to the rotunda." He concludes by stating that "the above mental map is assumed to



be the most complicated one any visitor can be expected to remember."¹⁷

A third image can be developed by concentrating on use-locations as the basis of imagability. Such a system would encourage visitors to think of the museum as a circulation and visitor support system coupled to eight collections. Individual floors would be de-emphasized in favor of total collections.

These, then, are three images the museum might seek to foster. The other possibility, of course, is to assume that a visitor does not need aid in constructing his mental image of the museum, that all he requires is information in raw, unstructured form. In this case, a much less defined way-finding aid should be developed.

As we have seen, images have three components, two of which we have already dealt with: identity and structure. The final point of consideration for developing an aid for

way-finding lies in the third component:

meaning. For an aid to have meaning, it must be intimately tied to the needs of the visitor. From the study conducted in November on movement patterns, it became clear that these needs included the following questions:

1. What kind of art does the MFA contain?
2. In general, what should I see?
3. In general, how do I get around the museum?
4. How do I get to point X?
5. What lies on the path to point X?
6. Where am I now?
7. Am I still on path?
8. What is over there?

An aid which provides identification and structure to the objects in the museum, and is meaningful to the visitor, will be capable of providing a clear and useful image.

Using this as a basis, a second series of studies was conducted to test the usefulness

of the different organizations of the museum. It was decided to test these using three styles of maps (see Appendix C). These maps were developed both to cover the range of image possibilities (unstructured directory, structured by architecture, and structured by use patterns) and the range of maps typically given out by museums (see Appendix E).

Using the same criteria as the first project, twenty-six people were selected (ten for the map based on the museum as a grouping of twenty-seven architectural units, ten for the map based on the museum as a grouping of nine collections and use categories, and six for the map based on the museum as a grouping of 150 public galleries and use spaces) during the months of February and March. These people were seen partly as experimental subjects and partly as user consultants. They were each told that the map was experimental and that their opinion

on the effectiveness of the map would be requested. In this way, their behavior would be more than likely affected (hence not good experimental subjects) but at the same time they would become more aware of their way-finding behavior, and thus more effective "consultants".

Interviews were given both before and after their tour through the museum, and, as before, their behavior was observed as they actually proceeded through the museum (see Appendix B). The pre-tour interview was designed to elicit background information. The post-tour interview was geared toward clarification of behavior and image formation. It was meant to elicit a verbal description of their image of the museum, to measure their recall of where they had been in relationship to the map, to draw forth their own memories of certain behavior that was unclear, to check for

satisfaction with where they went as well as where they did not go, and to record their impressions about the map they used as well as the two they did not use. This information can best be summarized in three sub-processes (the map learning process, the decision-making process, and the image formation process) and a discussion of the usefulness of the maps as aids to way-finding.

The Map Learning Process

When you enter a new environment, you must gain a basic understanding of it before you can navigate through it. But if you enter a new environment and are given a map, you can choose to learn to use the map first. Hopefully, learning to read and use a map (or any way-finding aid) is relatively easier than learning to navigate an unfamiliar environment.

It was my initial belief that using

maps of a museum was relatively straightforward. It proved, however, to be a many step process: interpretation of format and symbols came first, with orientation and identifying following immediately afterwards. Furthermore, there is a general problem of converting a floor plan to a three dimensional environment.

The format and symbols of maps were generally quickly understood, though there were frequent problems when any form of complicated format (such as a matrix) was used. To accomplish this, though, certain bits of information were totally ignored and the map itself was frequently simplified. As an example, in a subsequent study of sixty visitors which the author conducted within the museum (see Appendix B), it appears that architectural information is generally overlooked in favor of verbal information. If a person is given an unmarked map of the floor he is on, he will

frequently be unable or hard put to differentiate the curved stairwell near the Fenway from the straight one at Huntington, even though he is standing on one of them. The same is true for differentiating the entrances themselves, even though they are architecturally quite different. For most of these people, labeling the entrance as "Fenway" or "Huntington" made the process trivial.

Once this was accomplished, an attempt occurred to anchor the map to the physical environment. The process involved discovering where one was, and then orienting the map correctly. For those who knew a few places in the museum, the map was related to these points. The points chosen tended to be relatively simple use-points, such as the entrance, a staircase, or a well known collection.

For most people, however, it was not so easy. For them, the map presented general

problems of translating a floor plan into an unfamiliar three dimensional environment. As a result, they had difficulty orienting the map. Even after succeeding in anchoring one point, they still could not use the map until they had moved to another point and anchored that point as well. By so doing, the map took on a physical and perceivable character, and could be used effectively. If, after trying a few times to anchor it, the visitor still did not understand the map, he would most likely give up. This whole learning process generally took about two minutes of actually working with the map spread over the first five to ten minutes of the actual visit.

The Decision Process Coupled to Maps

Having reached the point where a person understands the map, he now has another tool for understanding and using the museum.

More than likely he has already used it to see what is available in the museum, and perhaps has selected one collection and is trying to find it. After this point it is interesting to observe the purposes for which a visitor references the map throughout his tour.

The most common pattern is a path-oriented process and is especially typical of the infrequent visitor. The map is anchored to the present location and the eventual goal is pin-pointed. After this is accomplished, alternate paths to that goal are investigated, and the best path chosen. While on route, confusing points are checked against the map. Another way of achieving the same type of map use, but in a less deliberate manner, can be found in people who set out for a goal, get side-tracked on the way, and then re-check the map before setting out again.

Aside from these two, other patterns

exist which are typical of the infrequent visitor. The map is often used as an information source, answering such questions as "what should I see?" and "what is available?". In many situations, a person who is just touring the museum in an unstructured way will consult the map when bored in one collection and shift directions for another. Finally, the map is also used as an immediate reference source: at any place where there is more than one choice, the map is used to answer the question "what is in each direction?".

For the frequent visitor, an additional pattern can be found. This is especially characteristic of the purposeful visitor. Here, the map is used to answer the question "how do I get to a particular collection?". In short, it is goal oriented. Still another pattern unique to this group can be seen in the person who uses the map to "bring

everything together" or to "see how much of the museum I already knew." Here, the person is using the map to confirm or organize already known information.

Before moving on, there are two points that deserve particular attention. The first is to underline the observation that two people, when touring together, use a map more often than one visitor alone. If he has the map, the person who finishes with a gallery first will frequently refer to the map out of curiosity and to fill the time. More than a few times, this behavior led to that person discovering something of interest, which they later went to see.

The second point is in reference to the concept of being "lost". A visitor is never lost until he wants to leave the area he is in and cannot. A typical visitor, realizing he does not know where he is, will continue

to tour the museum. It is only when he has to find his way to a specific place that he must directly confront this inability to move knowledgeably. It is at this point that the museum is first conceived of as a total maze. Thus many visitors can have very little concept of how to get around the museum, yet enter a difficult area, confident that the maze will eventually end. These people are never really faced with their lack of an environmental image, unless they want to leave before they happen upon an exit. It is at this point that discomfort sets in, and, if help cannot be found, a frequent response is to attempt to backtrace out of the unfamiliar territory. In short, an image of the museum is not necessary as long as a visitor is confident that he has no major decision to make.

Visitor Impressions: On the Nature of Maps,
Museums, and Images

The following are comments given by visitors to the museum in relationship to the map they used and the two they did not use. In some cases they have been paraphrased for clarity. Three or four "typical" responses have been noted for each type of map used.

Architectural Map:

teacher--tenth visit
student--first visit
warden---fourth visit
lawyer---third visit

Collection Map:

hospital worker--eighth visit
postal worker----sixth visit
student-----first visit
teacher-----first visit

Directory Map:

insurance salesman--first visit
air industry-----first visit
student-----fifth visit

Map Based on Architectural Units Within the Museum

I don't imagine the floors as similar, they seem different. I still get disoriented. This map didn't convince me that they were the same. To me, the first floor is a lot of corridors, while the second is a lot of open spaces. On a map, halls should be different colors than rooms. The picture I have of the first floor is as a solid block, impossible to get through.

The directory is too complicated alone--too picky. You can't reverse it to find out where you are.

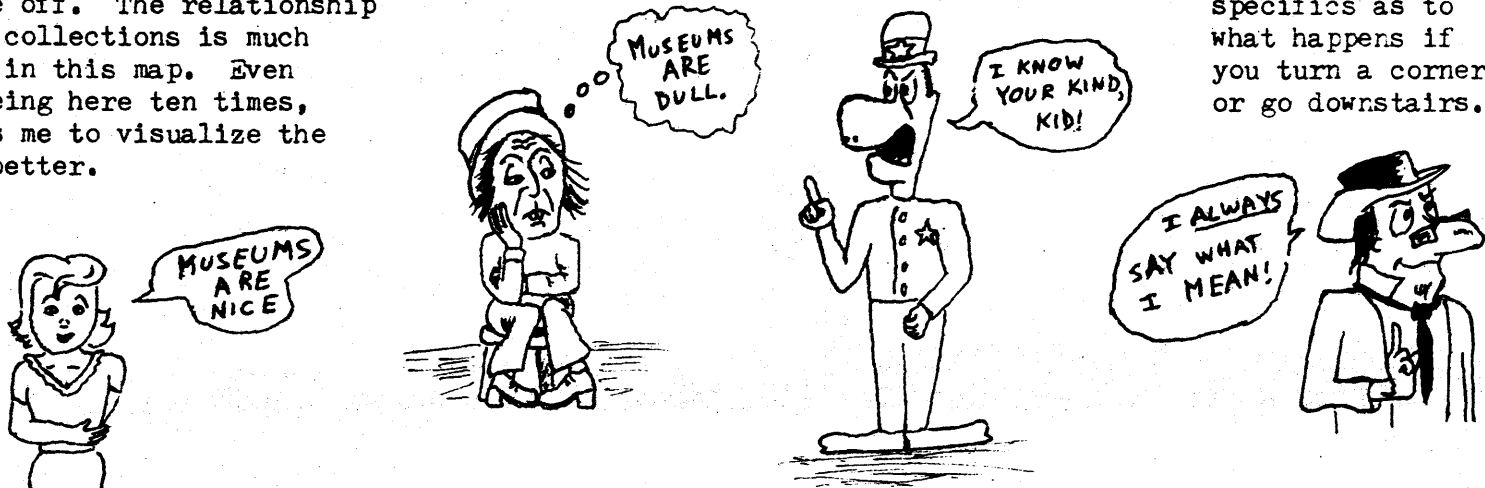
The collection map is very good. It's exactly how I picture the museum, especially the special exhibits and the corridors. In the architectural map, the colors are the same and this threw me off. The relationship between collections is much clearer in this map. Even after being here ten times, it helps me to visualize the museum better.

The museum is confusing. I guess the layout is alright with periods running into each other. But the museum has no defining features. I couldn't understand the map since the layout is so difficult.

The museum is very loosely put together, but not all that confusing. It took a while to figure out this map. Each section should be colored differently. I also had difficulty figuring which entrance we came into through. I didn't understand the map until I associated the rotunda with the central corridor on the map.

I think the collection map is best, especially for the first time visitor. The directory map is much too complicated.

The museum has two major floors. It is put together vertically. For instance, the decorative arts collection is a vertical block on the north side. There is a very large decorative arts collection, and the good European art is upstairs. The middle of the museum is confusing, but the sides make sense. The court is not at all obvious most of the time. The connections from back to front are difficult. In here, a corner is just a corner. There are no specifics as to what happens if you turn a corner or go downstairs.



Map based on the Collections and Uses of the Museum

The museum is a series of permanent collections and special collections spread out on two major floors. Very few things make complete circuits. There are frequently dead-ends which force one to retrace steps and check maps constantly. It's not too difficult to find out where you are because the center hall serves as a reference point.

The map is very good. The architectural map has too much reading, though, and the matrix is somewhat complicated. Furthermore, I never noticed the different architectural sections. The directory is impossible.

It's a series of labarynths. The museum is much too complicated. There is a sequence, but it is not easy to understand. I never could understand the map, either.

With two main floors, the museum is mainly composed of a series of connecting rooms. Many points are confusing. The map was very helpful, though it took a while to figure out.

The museum has two main floors, each square in shape. A garden is in the center. Rooms connect around these. Each series of rooms is like a maze, but they all eventually connect to a main hall, so you can't get lost. The museum is much too large to see in one day.

The map was generally very good. It was helpful in finding out how to get somewhere and also aided in determining what to see. One suggestion might be to have large maps in the lobby.

THERE'S SO MUCH TO SEE!



I'M GLAD I DON'T HAVE TO DELIVER LETTERS HERE!



GEE! WHERE ARE THE BOYS?



COME, CHILDREN! WE GO TO THE SECOND FLOOR!



Unstructured Map Based on a Directory System

All I can say is that there are certain areas for different art. I almost think of the museum as one floor. I guess we preferred what we saw to what we wanted to see. I would have liked either of the other two maps better.

I have no idea of how this museum is put together. It's confusing and very easy to get lost in. We just wandered through the entire trip and we're tired of looking and walking. I had no patience with this map and either of the other two would have been greatly preferred.

The museum is a series of rights and lefts--a patchwork of separate galleries. American is on the first floor, paintings on the second. Generally, I would not use a map; I would ask for directions instead. A map is too inconvenient, especially if carried. You might try using color in the map and it would be more convenient if it were placed on the wall.



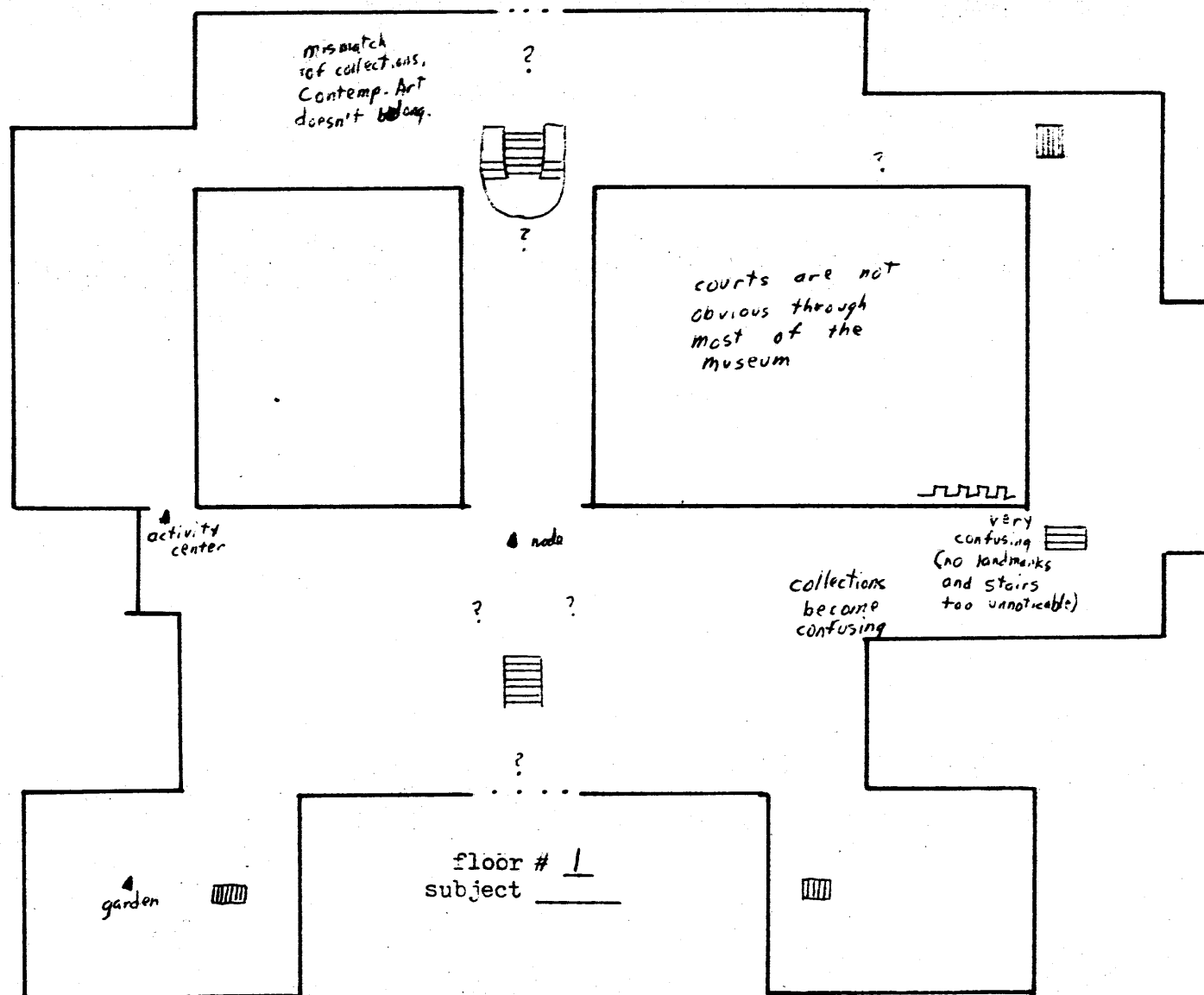
Image Formation and Map Usage

As Kevin Lynch pointed out, when an environment is confusing and ambiguous, an observer will tend to seize upon other cues to define this environment. This seems to be precisely what has happened in the museum. Both because the architecture is undifferentiated and because the main structure of the museum is its collections, the main image that a visitor comes away with is the museum as a series of collection rather than as an architectural unit. This "collections" image seems to have the greatest meaning for the visitor, answering his most pressing questions in a direct manner.

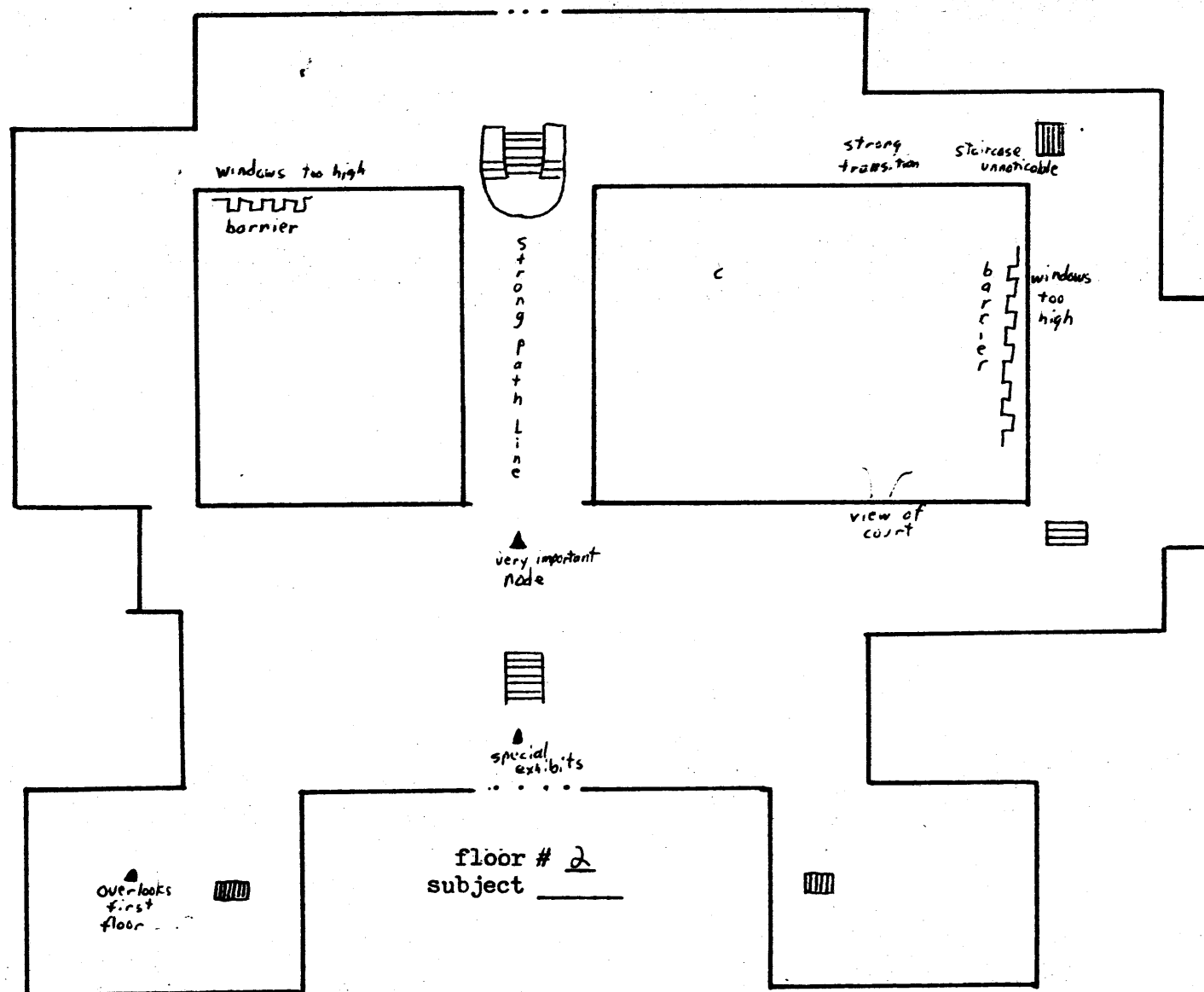
An environmental image, Kevin Lynch has pointed out, is composed of paths (channels along which the observer customarily, occasionally, or potentially moves), edges (boundaries between two phases), districts (areas with common, identifying character),

nodes (strategic spots which are the intensive foci to and from which a person travels), and landmarks (simply defined physical objects).¹⁸ "Orientation within a museum" and "development of a total image" depends upon "recognizable architectural equivalents"¹⁹ to these five elements. The problem within the museum, however, is that the paths and districts (seen by the visitor as the corridors and collections) merge, the edges between sections are often unnoticeable and the nodes and landmarks are virtually all located in the central mall area. As a result, the typical image that a visitor carries around with him tends to be weak and ill-defined. This is especially true for infrequent visitors and for visitors who are not strongly pre-inclined toward one section (a section which the frequent, purposeful visitor soon learns quite well).

The maps, if organized by sections, seemed to greatly aid the process of image formation and increase the understanding of the museum. Still, it proved to have many shortcomings: it does not read easily since it is only partially tied to the environment, it is difficult to orient, and it is seen as inconvenient by some.



The museum's strong and weak points



Since image development is a two-way process between observer and observed, it is possible to strengthen the image either by symbolic devices, by the retraining of the perceiver, or by reshaping one's surroundings. You can provide the viewer with a symbolic diagram of how the world fits together: a map or a set of written instructions.

Kevin Lynch
Image of the City

Chapter 6
Analysis of Alternatives

"The more at home a man is, the less need he has for consciously designed information sources in his physical surroundings."²⁰ By inverse logic, then, consciously arrayed information becomes more important as an environment becomes more foreign. As we have seen, it is not at all easy to be at home with the MFA. The designer must therefore be able to explicitly reveal its form and functions through other means. It is to these "other" means (use of symbolic devices, the retraining of the perceiver, and the re-shaping of one's environment) that we now turn our attention.

Strengthening the Image Through Symbolic Devices

Symbolic devices are perhaps the simplest and most direct means of affecting way-finding behavior. Certainly they are the most widely used, with devices such as maps, directories, and guidebooks falling into this category. Furthermore, individuals who provide information, such as guards, can also be considered as part of this group.

Yet, this type of device, when provided in carried form, has both problems and advantages. This has been echoed by Robert Weiss in his study of the Seattle World's Fair:

Very few people can take a program and visualize the actual scene represented by the map, and a guidebook is of no use if the visitor does not know what he wants to be guided to. Nevertheless, guidebooks seem to be reassuring, and many people did want them and bought them immediately on entering Fair grounds, even though they may not have had any use for them until they decided to see a particular pavilion.²¹

Because of this, it has long been suggested by different designers that large floor plans and

exhibit listings be installed in "areas of decision"²². However, in a survey of information devices provided by different museums (see Appendix E) this seems to be an option that is seldom utilized. The possibilities of these will be dealt with here.

From the studies conducted, it was possible to develop eight criteria by which any map, list, sign, or other information source should conform to. Using these criteria, problems and opportunities were also isolated.

1. The devices should be reachable by a visitor seeking information at the time he needs it.

Reaching all visitors with information appears unlikely if the designer tries to restrict information to one source. Frequent and purposeful visitors probably will not carry a map, whereas new visitors greatly appreciate the versatility in having information available at any moment. Built-in maps are more

accessible to all, but have the disadvantage of providing information at only select points. This is acceptable to those who have clear ideas as to what they want to see and who limit their tours to special sections. Unless the nearest map is always easy to find, though, it becomes unacceptable to the visitor who rambles freely through the museum. Still, there are ways of making such maps more noticeable. Effective use of intensity, novelty, color, and perhaps even sound can pin-point maps and increase curiosity about them. The shape, size, contrast and illumination of the maps also bear heavily. Besides these, the most versatile alternative is the use of guards as information sources, since they tend to be easily found almost anywhere.

2. Symbolic devices should serve to orient the visitor in space and to help him locate those points within the museum that he desires to find.

Orienting a person in space and by function is certainly one of the classic uses of maps. It is also a very difficult one. A person must learn how to read the map in order to do this successfully. Carried maps and guidebooks can be learned by anchoring designated locations on the map to two physical spots and using the real space so created to interpret the map. Since built-in maps cannot be moved, this process cannot occur. It is likely that by orienting the maps within the museum, a single anchor point will serve as well as the two, though this remains unclear. Guards and signs can effectively orient for specifics only.

"Locating points" is a somewhat different problem, and means unique things to various visitors. For the purposeful visitor, the needs tend to center around the questions "How do I get to point X?", "Am I still on path?", and "What is located over there?".

For the more casual visitor we can add:

"What kind of museum is this?", "What shall I see?", "How is the museum organized?", "What is the most interesting path to follow while going towards pointX?", and "Where am I now?". Such questions are best answered by a mapping system or guidebook. Guards, capable of dealing with specific questions, would have real difficulty with general ones. Signs can only answer a few specific questions. Maps should be color-coded and have some form of simple directory organized by either architecture or collection ~~matched to~~ its code, this being the format that seems to answer the most questions. Permanent maps, however, may contain more detailed information. All maps should also be reversible. Given a destination, the visitor should be able to find it on the map. Given a point on the map, he should be able to determine what is located there.

In this way, the visitor can satisfy all the needs cited above.

3. Such devices should encourage the visitor to form a coherent image of the MFA, thereby giving him a framework within which he can more knowledgeably deal with the museum.

If an information system can successfully augment the environmental image of a visitor, that visitor's future information needs are correspondingly lowered and he becomes more self-sufficient. The image creates a familiarity with the museum, a familiarity that enables the visitor to take full advantage of opportunities and to do so confidently. Like the previous criteria, this is best met with printed material. Guards can be helpful in pointing out and emphasizing individual pieces of an image, but they cannot organize it cohesively. A built-in system would probably work best, since the maps can be large, vertically arranged to suggest the three floors of the

museum, and oriented with the museum itself.

4. These devices should be simple to understand and serve to reduce an overload of information.

Simplicity is essential for understanding and retention of any information. Excessive information becomes dead-weight. Guards can be effective at this: they can provide only the information requested of them. Signs are also quite effective. Maps and guidebooks must be ready to answer many questions, and so cannot be as simple. A balance between flexibility and simplicity must be achieved. Built-in maps can achieve this more easily than carried maps since they can provide different information at different points.

5. The devices should be designed as a total system of information. Each element of that system should reinforce the others.

Repetition and reinforcement simplify the difficulty of learning how to use information devices. Furthermore, such techniques

help the visitor construct a strong environmental image of the museum as a whole. Integration into a total system is also the most efficient use of resources and can be made more aesthetically pleasing than a random assortment of parts. Given the results of the studies, the central element of a system should be the color-coding of collections and the development of maps based on the concept of the museum as a series of districts (collections and visitor services). The color scheme, nomenclature, and typography of all maps and signs should be developed to be compatible with each other and with the environments in which they rest.

6. Built-in devices should be placed so that they are not in competition with other things for attention.

Carried maps and guards are not part of the physical museum and tend to be ignored when not in use. Built-in maps and signs, however, are not. This is especially true of signs

with their emphasis on a strong, single message. The problem is greatly exaggerated when many signs are clustered together, since they compete not only with the environment, but with each other as well. Built-in maps are somewhat better since they do not demand immediate attention. Yet they are visual displays, and as such compete with the art of the museum. This is aggravated by the necessity of designing such maps to be obvious. A way of separating these two functions of art and information would be desirable if it could be achieved without reducing the availability of the maps.

7. Information devices should be adaptable to changes within the museum.

Museums are places that frequently undergo change. Information should either be general enough to absorb the change within its framework, or else have a format that can adapt to

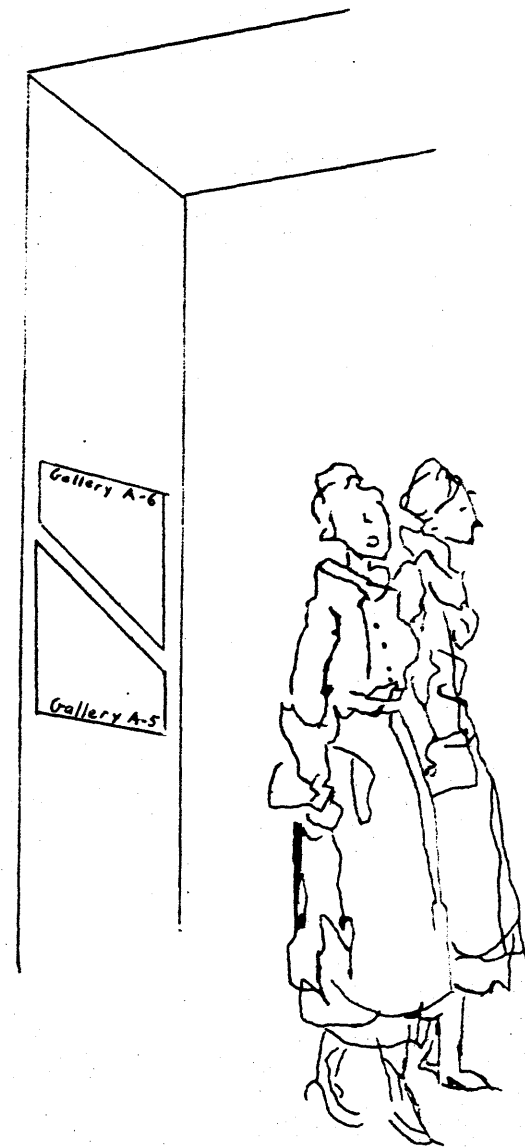
these changes. Carried maps should therefore be kept to a certain level of generality. Built-in maps can be more specific if designed to allow for alterations. Signs and guards are both easily changed.

8. All devices should reflect the priority of needs that the visitor carried into the museum with him.

Different visitors enter with specific priorities of needs. It is best if the information reflected the aggregate of these priorities. For instance, visitor services are a high priority item, as is the location of entrances to the building. The best way to identify high priority places is to use a few select signs to designate them. Maps can also show this. Guards cannot order the information they give out, but they too are good at matching the visitor's priorities since they answer the specific questions asked.

In order to create an information system that meets the criteria, a number of ideas are recommended. To begin, it is recommended that the museum's visual communication and information be integrated into a system based on a coding of collections and visitor services by color. Corridors, visitor services, and special exhibits could be grouped together under one color, while Asian, Egyptian, Greek-Roman, Prints, American Paintings, American Decorative Arts, European Decorative Arts, and European Paintings would each have their own color. The colors of similar collections should reflect this similarity. The jambs of all doorways will label what is on either side of it and will use the colors to designate which collection each side lies. A change from one collection to another would therefore be made prominent.

Where possible, shades of the color can be used in displaying pieces within a



collection to re-inforce the image.

Carried maps are to be constructed to show the architectural details necessary for effective navigation, and at the same time also emphasize the enviromental framework set up within the museum. The maps will be color-coded by the rñne sections already set up (see Appendix C, exhibit 1), thereby making more solid the connection between map and enviroment. A brief and simply understood description of what is available in each section can be placed on the bottom, this too being keyed by color. On the maps themselves, a minimum of writing should exist, with only high priority information being noted. Providing the most information in the simplest manner is the key to successful carried maps.

As part of the total system, permanent maps could also be used to aid general guidance throughout the museum. These could be used

to supplement the smaller carried maps and to provide information to those who have no map. Each should be oriented in the same manner to the museum proper, should show the visitor where he is, and should be coded identical to the carried maps. They should be located on each floor near all six stairwells. In this way, the maps would be consistently located and for the most part be in the center of collections, thus providing both identity and cohesiveness to each collection.

Each location should have two sets of maps: one which gives a general picture of the entire museum and one which gives a detailed view of the collection the visitor is in. General historic and artistic information concerning the collection, particularly good or typical pieces, and other types of information can also be provided as part of this system. In order to pinpoint the maps more reliably,

the rooms within which rest the permanent maps should be painted the color designated for a visitor service area. There are three places, however, where this is not feasible: on top of the Fenway stairwell where the Monet's are kept and on each floor of the currently designated A and Z sections. For the latter two areas, the maps could be placed in the stairwell itself and the stairwell so colored; for the Fenway area it seems best to simply place the maps at the top of the stairwell, relying on its central location to make the maps obvious.

Aside from the permanent maps, signage should be kept to a minimum. Signs are highly specific information sources and should point out only the highest priority locations: the visitor information center, both entrances, the restaurant, and the rest rooms. They should be placed so that no more than one supplementary

sign is needed to connect a visitor with his destination. All signs should be uniformly designed.

Finally, guards can be a major factor in guiding visitors. Guards should be required to know the location of the most sought after works of art. They should be encouraged to give directions in terms of the environmental image that the maps seek to create. Visitors should be made aware of the fact that guards are there to help them by placing this message on the maps and in the VIC.

The Process of Retraining the Perceiver

Teaching a visitor about the museum may seem unorthodox at first, but it is a process that occurs at every point the museum intervenes to aid the visitor. Maps are not pure information guides--they cannot help but also shift a person's perception of the museum's

architecture, collections, and opportunities. Certainly guided tours do this also. In fact, this is potentially the most potent way of teaching about how the museum may be used and about how it may be moved through. However, it is limited in scope, and a more general education ~~tool~~--the visitor information/ orientation center--is needed. Such a center could contain slides or photographs of pieces within the museum, selected pieces from the museum proper, notes on changing events, maps arranged in three dimensions, and a person to answer questions. It might also have more elaborate devices, such as maps under the control of the visitor or projection and auditory devices matched to collection and under visitor control. Again using the research projects as a basis, the following criteria were developed.

1. The elements of an education/ orientation device should give a simple, yet vivid, idea of what the museum has to offer.

It should present the ideas in as strong a visual or auditory a manner as possible. All information should also be compatible with the information system already discussed. All education should be based on the visitors pre-conceptions, seeking to adapt to them rather than to re-educate them. As an example, maps should be ordered by collection since this is the way visitors conceptualize the museum.

2. The system should encourage diverse and responsive interaction with the museum and open opportunities to the visitors.

Encouraging diverse and responsive interactions with the museum and its opportunities is perhaps the most important education value of a VIC. The first-time visitors may discover general collections of high interest that would otherwise go unnoticed. The more frequent visitors may use it as a basis for expanding

into new parts of the museum or for learning about special collections and events. One way to achieve these aims is by means of small special exhibits of pieces from the museum. These can take on two forms: a few select pieces from each collection or a rotating exhibit with many pieces from one collection at a time. The first would serve best to make the museum as a whole more imageable. The second would serve best to encourage visits to individual collections. The former would therefore appeal to infrequent visitors, while the latter would prove most beneficial to more frequent visitors.

3. The location within the museum of everything referred to in an orientation device should be clearly indicated.

Everything in the VIC should be displayed in relation to its location and collection. The color-key used in the map should be used frequently in the display. Slides of art

should be shown by collection and location. Maps should be oriented within the museum and should be arranged vertically to emphasize its connections with the physical environment. Furthermore, if special exhibits are made with pieces from each collection, the pieces should be exhibited on a large floor plan of the museum, using the color-code of the collections where possible.

4. Such devices should encourage the visitor to form a coherent image of the MFA, thereby giving him a framework within which he can more freely interact with the museum.

Like the maps, education/information devices should encourage the process of image formation. However, given their broader purpose of education, they should be able to do a much more effective job. This is especially true of a VIC, which is highly concentrated in nature. Most of this depends on how information is displayed and what information is presented.

5. Any device should be reachable by any visitor at the start of his tour of the museum.

For this to occur, the information must be physically near the entrances, clearly indicated to all visitors upon entering, and capable of holding a large proportion of these visitors at any one time. For a VIC, a condition in which every visitor must pass near the edge of it would be ideal. This however, seems infeasible.

6. A VIC should be engaging to a passer-by and hold his attention once attracted.

As a matter of design, the center should be physically and psychologically engaging. It should also be a comfortable place to stop and stay. It needs to be near a major movement path, but somewhat aside from it.

7. A center should be functionally separated from activities in which it will be in competition for attention.

A center would not be effective in an art gallery, for it would compete with the displays.

Nor would it work if located before the last barrier to entry: the ticket collection booth. Until this is passed, the concern of the visitor is predominantly that of entering. This visitor behavior of not worrying about what he will see until after he is inside this entry point was seen often in the research conducted.

8. Any device should be adaptable to changes within the museum.

9. Each device should be flexible in terms of the time needed for the device to be useful to the visitor.

People come and go and are not likely to wait around to use an information center. The VIC, then, should be usable for long or short periods of time. A visitor should be able to gain insight whether he stays for one minute or ten minutes. Because of this, constant time displays, such as movies and audio-visuals, are not too feasible. Tours are also constant, though people are more willing to wait for a

tour than for more general information. Within a VIC, this can be alleviated by making audio-visuals which are responsive to individual needs. For instance, a visitor may be able to select a collection for which he desires information and receive that information in a small booth. This would also meet the final requirement.

10. Where necessary, the devices should be capable of providing for individualized uses.

Most devices will be able to answer visitor questions without being individually designed. The providing of tour books seems to be an exception, though. It is feasible to individualize the tours available by breaking down the printed material into many pamphlets instead of one book. Each pamphlet would seek to guide an individual through a single collection or the museum in general. In this way, a visitor could choose the pamphlets desired.

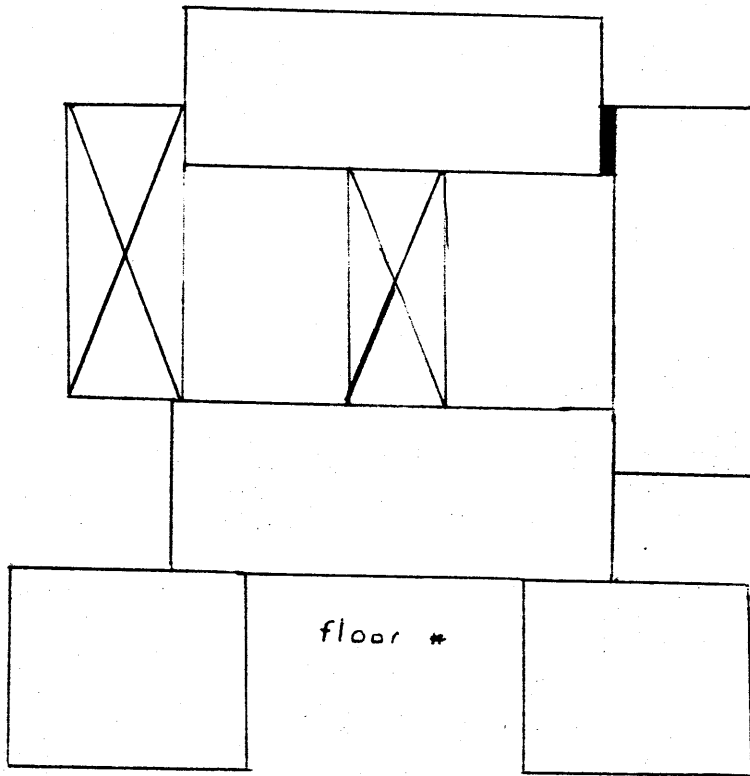
To achieve the balance of information

and education desired, a Visitor Information Center should be established in both the crypt area and in the second floor rotunda above it. The crypt VIC should reflect its darker, somewhat more quiet location and would serve as the major center. The rotunda, being a well lit and very lofty space, should be more active and serve to supplement the crypt center.

The crypt VIC would contain a slide show of pieces available within the museum, a permanent set of maps, a place for notes on changing events, and a person to provide information. It should also contain places to sit, music, and perhaps even an extension to the cafeteria. The more pleasant it is, the greater the likelihood that it will be effective. Signs should be used at the entrances to the museum to locate this VIC as clearly as possible.

The slide show can take on two forms. The more complicated, and more visually

effective, would use a blank map of the museum as the screen onto which the slides would be projected. The five screens that resulted would each serve to roughly locate the slides within the museum. Slides of the same floor would be projected at the same time with the floor number appearing underneath and the collec-



tion each piece is taken from indicated by color and by labeling.

This systems greatest advantages lie in its flexibility and imageability. At any point in time, anywhere from five slides (for general effect) to one slide (for emphasis) can be shown. Furthermore, the speeds can be altered as desired. In short, a show with high visual impact is possible in a format that simply displays the museum. The problem is that each slide would have to be prepared individually to fit the screen system.

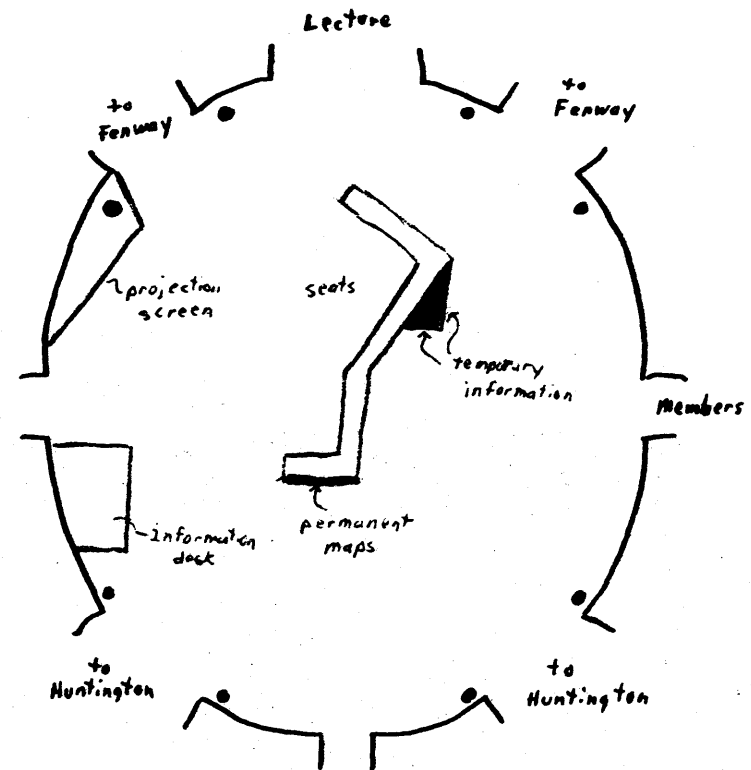
Even if this show seems too complex, the slides of any show should still be geared toward informing the viewer as to where each piece shown is located. Slides which only point out what is available and ignore the question of where it is available raise curiosity but do not appease it. Even in simple form, each element within a slide show

should be labeled as to its location and, where possible, the color associated with the piece's collection should be used.

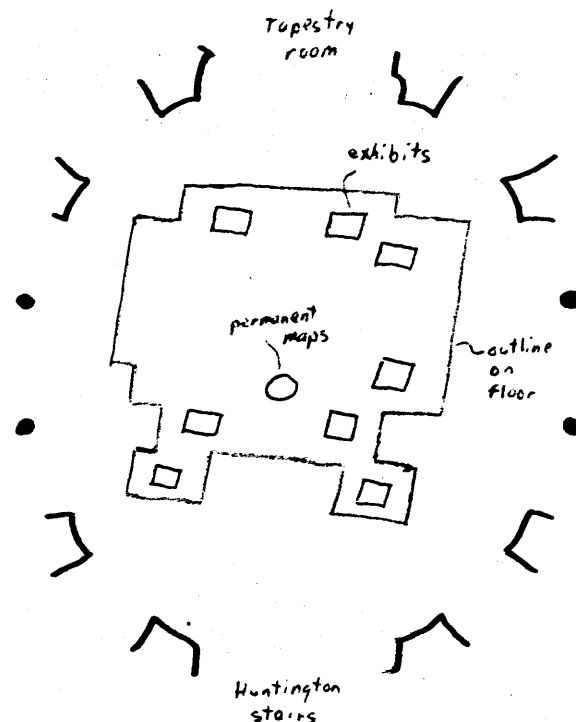
The permanent set of maps should be of large scale. Like the carry map, they should be color-coded and contain a simple directory. In addition, they should also have two more elaborate directories (one to index the galleries, the other to index frequently sought places) and label each gallery by room number (all gallery doors should also contain these numbers). Finally, the three floor plans should be placed above each other. This may prove difficult to do in a perfectly vertical order. However, by tilting the top and bottom plans, a more easily readable, console-type system could be developed.

The list of events should be particularly easy to read, using removable letters on a large board, and located along movement lines

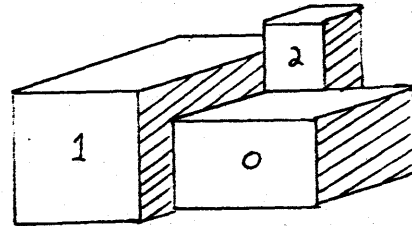
where many visitors can see it. All told, the crypt VIC could be designed similar to this:



The secondary Visitor Information Center located in the second floor rotunda above the crypt should be of smaller scale and of more active dimension. It would not have signs leading to it or designating it as a center, this priority being reserved for the VIC in the crypt. It is suggested that this system contain no place to sit in order to reflect the high volume of movement that centers on the rotunda. The entire center would be integrated into one system which would be composed of both actual exhibits from each collection and a set of permanent maps. In order to accomplish this, a large outline of the museum can be laid on the floor. The pieces selected can then be exhibited within that area of the outline that represents their real locations in the museum. The pedestals upon which they rest would be colored by the code discussed, and their floor number would be prominently



displayed.



The map system would be located in the area that represents the rotunda itself. As a unit, this system would be easy to pass through and yet give a vivid three-dimensional feel for how the museum is put together for those who stop.

Given their location, the Visitor Information Centers are more accessible to the Huntington Avenue Entrance. It seems desirable to seek to encourage visitors to enter through this entrance. This is particularly true since the Huntington entrance was originally designed as the Museum's main entrance. Its visual aesthetics are more striking and it is some-

what less confusing than the Fenway entrance.

Yet as the movement pattern currently exists, only 48% of visitors enter through the Huntington entrance. This, however, can be easily altered. A full 24.4% of visitors arriving at the museum are drivers parking their car in the museum parking lot. All these visitors are directed towards the Fenway entrance. By reversing the employees' and visitors' lots and by altering the condition between the Huntington entrance and the parking lot, it would be very simple to redirect that group of people to the Huntington Ave. entrance.

The providing of tour books should also be altered. Written tours could conceivably have a large impact on the experience a visitor has in the museum, but books tend to contain more information than what an individual wants and are cumbersome to use. Instead,

such tours should be written up as a series of pamphlets, one for each collection and for the museum in general. Such pamphlets could be bought individually for a small amount, preferably at the cost of providing them. They should be sold at the Information Center rather than the Book Store.

Re-shaping the Enviroment

Re-shaping the enviroment can be an extremely effective means of affecting an image, since it is from the enviroment that the image first springs. We have seen the problems many times; there is no need to go into them again. Our attention is best shifted to the opportunities that emerge from the problems.

The criteria by which action should flow is somewhat difficult to pinpoint. The problem is broad, yet simple to state: we wish to have an enviroment that is more imageable

to the observer. Perhaps the best way to specify the criteria is to deal with the image in terms of its five components: districts, paths, edges, nodes, and landmarks.

1. Districts (collections in the eyes of the visitors) should be internally cohesive and internally centered. They should be perceived as a single unit.

2. Edges should be discernable yet permeable. Some type of transition between collections should exist, though visual connections should not be impaired.

Since an inward directed collection will reinforce the boundary between it and another area, these two criteria are mutually supportive. Michael Brawne, in The New Museum: Architecture and Display points this out when he noted that "separateness not only provides a pause between sections of the museum, but makes each a more recognizable and visually graspable unit. It becomes, as a result, a more easily memorable division."²⁴ Architecturally, however, this may prove quite difficult to accomplish. When

galleries are moved, the boundaries of collections may be altered. Yet there are three ways in which a designer can enhance the level of cohesiveness within a collection without permanent architectural change.

To begin with, he can employ the color-coding discussed earlier. Under this idea, each collection would have its own color, as would the path system and visitor service areas. The jambs of the doors would be marked with a removable material (allowing for change in the museum) such as a textured and colored cloth. Transitions could be exaggerated with larger pieces of cloth and by having two different colors side-by-side.

The second alternative deals with connecting the collections split into two floors. This is particularly a problem in relationship to the four minor staircases. Each of these stairs serves as a center of a two floor

collection. The establishment of visual connections and intermediate levels between the floors would create a highly visual connection between parts of the same collections. It would also help encourage people to visit the zero floor.

The third alternative is to try to bring each collection onto the same floor. This, however, seems unlikely given the superior design of the second floor and the massive size of the collections that would result by total unification. The present situation allows a visitor to visit one floor and see part of almost everything. Such an arrangement is more flexible, and probably helps prevent museum fatigue due to boredom. In the author's view, it would therefore be better to keep the vertical and exaggerate it where possible.

3. Paths should be clear and continuous, with few branchings and a minimum of ambiguity.

On floor one, such branching of the corridors

in section M has become the classic design problem of the museum. I doubt that I could add much to the debate that has already ensued. Given that the total re-vamping of this central space seems unfeasible at the moment, the only other recourse is to use visual decision aids at each point of confusion. Locating a VIC in the crypt area would help considerably, with the signs leading to it tying the corridor system together.

4. Nodes, such as stairwells, entrances, and rotundas, should be exaggerated and made visually prominent. Accessibility to and through these areas should be simplified.

This suggests that the nodal points be made prominent and accessible, both visually and physically. Such places would then more effectively serve their role of orienting and dispersing people. Built-in information can be effectively tied to these areas.

The biggest physical problem does not

lie with the rotundas or the entrances, but with the staircases. The creation of half-levels and visual connections discussed earlier would certainly also improve its prominence and accessibility. At the very least, the elevator near C39 should be removed and that staircase opened up since it is now quite enclosed and isolated.

5. Landmarks, like nodes, should have high visibility.

This is particularly important for orientation. As such, the courts can be considered as the museum's most prominent landmarks. Essentially outside the museum, they are the focus around which the museum centers. Yet many people have only a very faint idea that they exist. In fact, of the twenty-six people interviewed in the second study, six of them were so unaware of them that when looking at a floor plan of the museum they thought that they were

very large rooms instead of courts! Opening the walls that face onto the courts would greatly ease this problem. By choosing such openings carefully, a minimum of structural alteration need occur.

With all this in mind, the following recommendations are presented. The first problem area lies in the discontinuity of the collections. The process of consolidating these collections would do much towards making the collections inwardly cohesive. To accomplish this, only two irregularities need correcting. First, the American Painting collection should be exchanged with the Print collection. Upon doing this, the Contemporary Art should be placed in the galleries nearest the Fenway entrance, the American Art filling the rest of the galleries. Secondly, the American Decorative Art currently located in galleries

1005, 1010 and 1017 should be switched with the European Decorative Art in 1021, 1023, and 1024. This entire process serves four purposes: that of releasing the Contemporary Art from the American Collection and making it a part of the general collection instead, that of placing the American Painting next to the American Decorative Arts, that of combining all the American Decorative Art in one section, and that of further consolidating the two decorative arts collections around two separate stairwells, thus making the vertical alignment easier to sustain.

The two courts that have developed as the museum expanded can be used effectively to help orient the museum visitor by organizing the museum and by clarifying critical points and to provide him with visual relief. This is important since the addition of wings C and X

disrupted the orientation found in the original museum. This is especially true of the older C wing because, unlike the newer administration wing, visitors can move through the wing. The Garden Court is therefore a focus around which a large part of the museum revolves.

The problem, however, is that neither of the courts were ever used as an effective substitute for the original focus. The view of the courts is very weak at many critical points. This is especially true of the older sections of the museum in which virtually every window that does exist is taken up by offices. To alleviate this condition, it is recommended that the Garden Court be made more visually prominent wherever possible. This is not seen to be of significant importance in relationship to the new Sculpture Garden since the administration wing did not complicate the movement pattern in this area.

To accomplish this on the first floor, the collections in 1D16, 1D19, and 1D20 can be exchanged with the offices now located on the other side of the corridor. This may present a problem since prints are sensitive to light. However, if the previous suggestion of switching the American and Print collections occurs, this problem would not exist. Secondly, the windows that were bricked up in gallery 1C10 should be re-opened. If it is thought desirable to keep the view of the garden at a minimum, the window can be designed as a reflective light source that allows a view of the garden only when a person is close to the window.

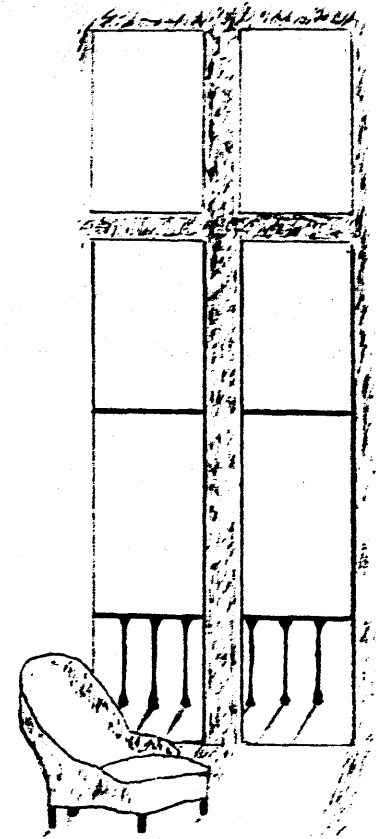
On the second floor, the problem is more acute. The Tapestry Room cannot have windows, and it is unclear whether the galleries 2D03, 2D05, and 2C04 are structurally capable of bearing windows since their outer walls

appear to be load bearing throughout. However, there are a significant number of changes that can increase the prominence of the court on this floor. The balconies that run on either side of the Tapestry Room can be opened during warm weather months. This can be done by re-opening the Rotunda entrance now blocked by the two large statues and by minor alterations on the Fenway side.

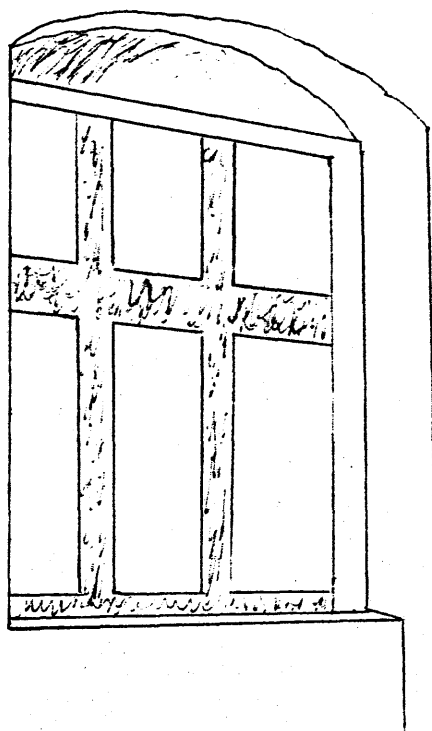
The windows that do exist on this floor are frequently too high.. This is true of the Medieval Gallery and throughout most of the European Decorative Arts. These should be lowered.

The largest windows can currently be found on both floors in rooms D06 and B36. These windows face each other and can be made quite prominent. It is desirable that they be made so, since such nodes could serve as centers for overlooking the garden, becoming

important elements of the enviromental image themselves. To accomplish this, galleries 2D07 and 2D06 should be merged and the window enlarged to its original size; the door between 2B36 and 2B37 should be enlarged to increase the visual connections between the large Egyptian gallery and the window area (thereby increasing awareness of the court); the windows should be extended to the floor or else down to a level where a person could sit on the sill; the areas should be made comfortable--rest areas in which places to sit are located--and the areas should contain permanent maps to help clarify the



corner conditions that exist near these points. These windows, as elsewhere in the museum, should be left unobstructed, though some exceptions to this rule can certainly be used to advantage. Finally, the design of the windows themselves should reflect the amount of viewing that will occur at each one and the collections they are located in.

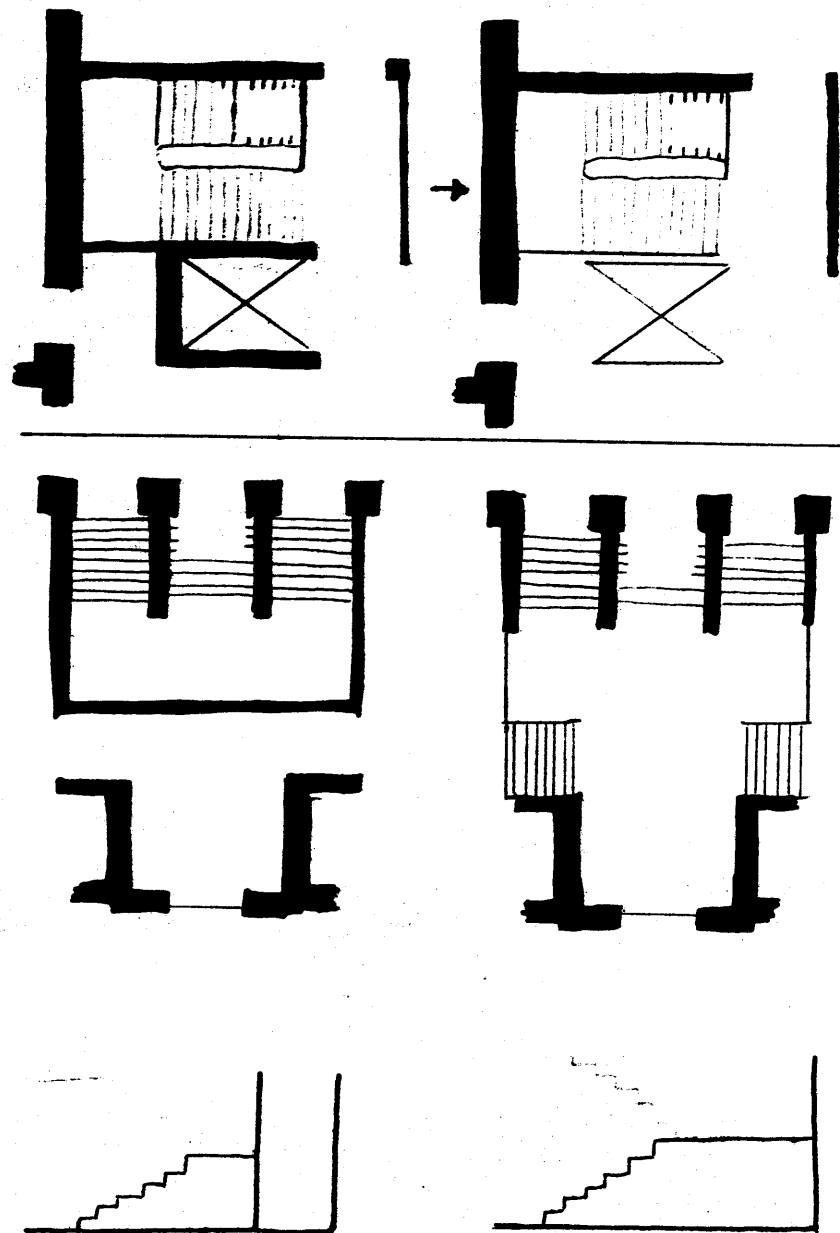
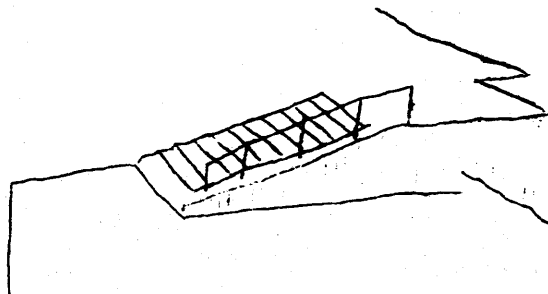


The last recommendations suggest specific changes in four stairwells. Each suggestion has the same purpose: to more effectively connect the three floors within the museum and to emphasize the vertical alignment of the collections. It should be noted here that no wall which is removed is an important load bearing wall.

The stairwell that requires the most urgent work is the one near C33. With an elevator on one side, walls on two others and a third wall right in front of the stairs, the stairwell is visually isolated. Passing from 2C32 to 2C23, a visitor is not even aware of its existence. For those who do see it, it is still a confined area. The elevator is not essential, since **four others exist**, including two for freight. To open this up, the elevator structure should be removed. This would provide visual prominence to this node.

It would also allow for visual connection between floors, providing in a visual form the information that each floor is similar to the others.

The other three stairwells should be dealt with in a different manner--instead of creating an empty vertical corridor, the creation of half levels would prove as feasible and more effective in communicating the similarity of the two floors. These half-levels would serve as places to exhibit works of art and locations for the permanent information. As such, they would serve as prominent nodes and effective transitions between floors, connecting the two floors in a more natural way.



For the stairwell near C06, all three floors should be connected by two half-levels between them; for the ones in A and Z, it need only connect the first and second floors. In these last two places, the windows should also be adjusted and made prominent.

Overview: The Final Look

It is time for the reader to re-introduce himself to the four visitors with whom this report was opened. Drift back, for a moment, to the young woman lost, to the 25-year-old male who knows exactly what he wants to see, and to the middle-aged man and woman who are not quite sure. Become at one with them,, and then project them out of today's museum into the museum of tomorrow--to the Museum of Fine Arts transposed.

Wandering through the Greek Tapestry, she began to realize how tired she actually was. It is time to leave. Still she hadn't picked up a map, and now she realized she couldn't remember how to get out. She continues to walk, not quite knowing how to get to a map. Passing the American Silver, she peers into the Egyptian gallery and instantly notices the large window and seats--at the very least, a place to rest. But there are maps here, too. She finds them, spends a few casual minutes peering out the window, and leaves.

xxxxxxxxxx

Heading up the Huntington staircase, the 25-year-old male has come to see the Impressionism exhibit. He reaches the Rotunda and stops. The museum didn't have this display the last time he was here, and he decides to have a look. While rambling around, his eye is attracted to a slender stone sculpture of a human figure: a Cycladic idol. Fascinated with its unusual design, he decides to see some other Greek pieces. He notes the gallery number proceeds down the hall, into the Greek collection (he remembers the color), and down the stairs (it was easy to find). He checks another map at the bottom. After reading what it said about Cycladic Art, he heads into the correct gallery.

xxxxxxxxxx

A middle-aged man and woman watch the slide show in the visitor's center as they have a cup of coffee to drink. Ten minutes later, they get up, having decided to see the American collection (the Wyeth attracted their attention). They check the large maps, and quickly notice

that the American is right behind them. Ah, yes--the same place as the slide had been projected. They pick up the guide pamphlet for this collection, and proceed into the section, all the while noting what the pamphlet has to say about Wyeth.

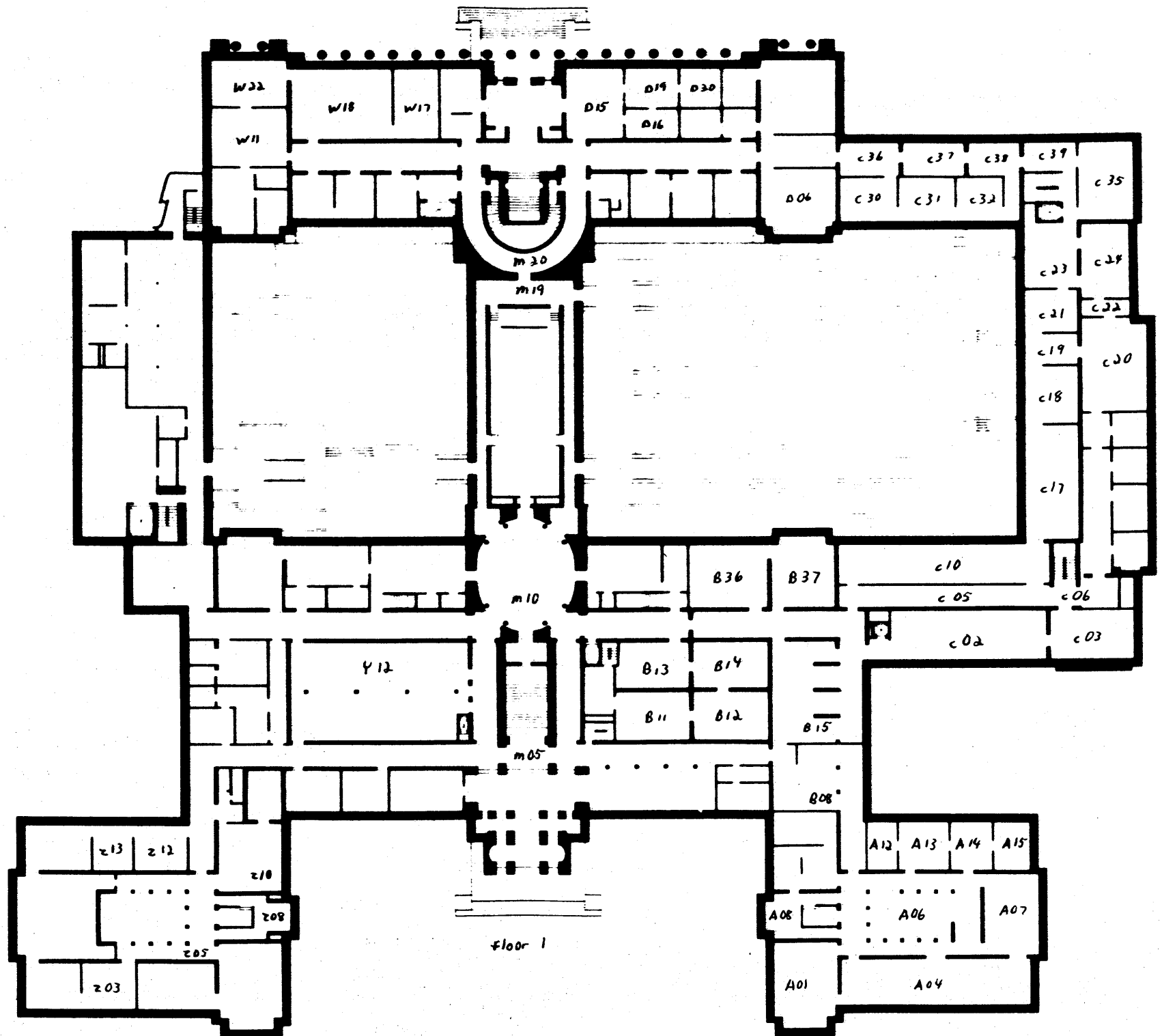
Appendix

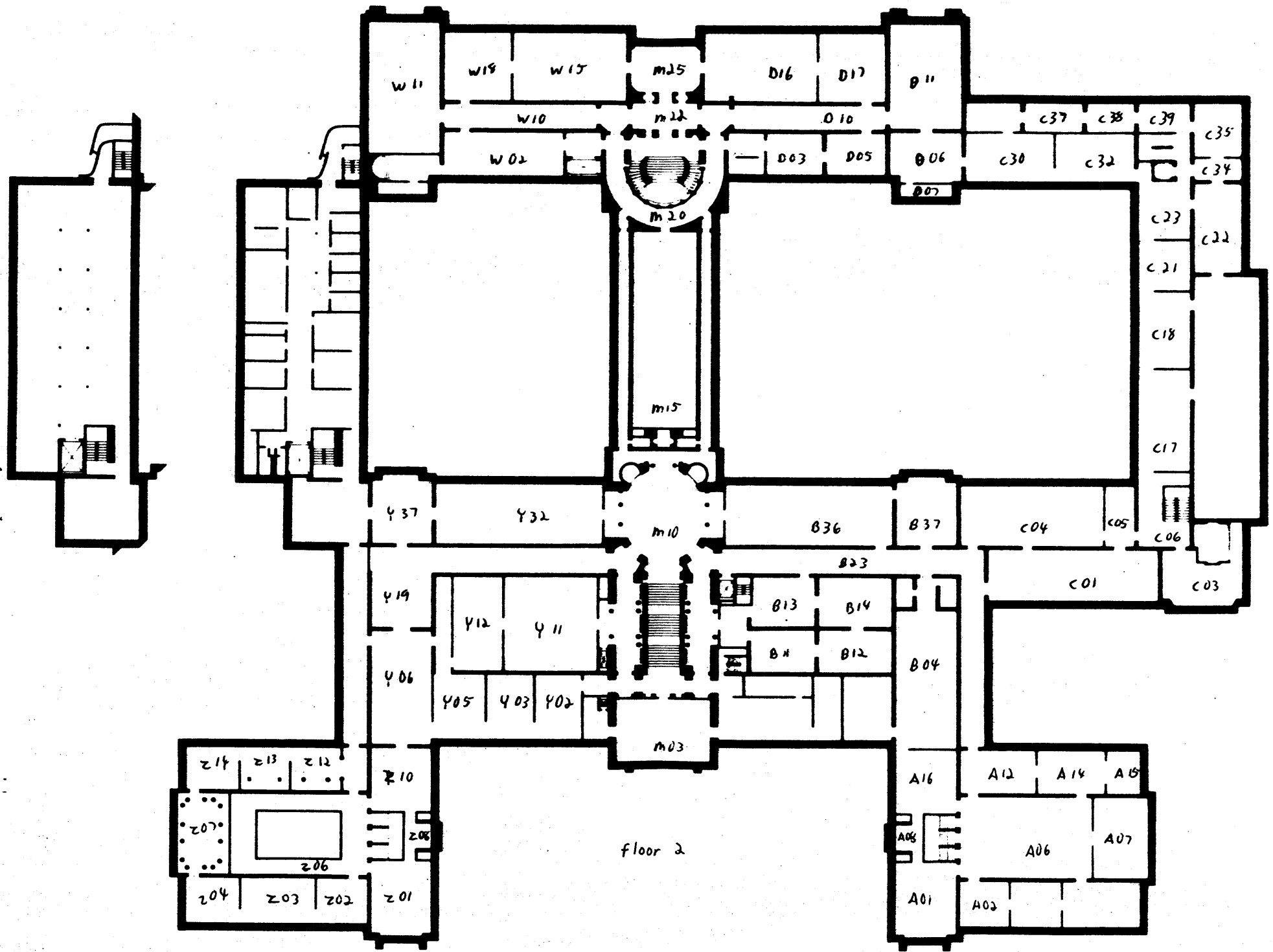
Whatever the information we seek, our ability to achieve it is affected by the form of the environment, but people with different levels of familiarity with the same environment and carrying out different specific plans will attend to different features of that environment... It should be possible to determine what those plans are and to design with attention to the relevant features. Some designers attempt to do this in a rough intuitive way, but a radical improvement in our ability to create relevant forms can be achieved through research. We need only observe and question the users of various environments.

Stephen Carr
The City of the Mind

Appendix A
Physical Plan of the Museum

The following two pages contains a floor plan of the museum. Each gallery number is labeled, and is here presented for the reader's convenience.





floor 2

Appendix B
Research Techniques

The analysis conducted by the author in relationship to information systems was based on four studies conducted during the last nine months. The first was done during the summer of 1973, the second during November of the same year, while the third and fourth occurred during February and March of this year. It is the purpose of this appendix to present the actual techniques used and then to raise questions about the methodologies thus employed.

The summer study was conducted by Joan McDonald during July and August. The object of the study was to obtain data on how people behave while in the Museum. The technique chosen was a loose form of tracking. Eight subjects were randomly selected at various points in time. Each was approached as he entered the museum, asked a few background questions and, upon giving permission to

Ms. McDonald, were followed as he proceeded through the museum. During this time all movements, behavior, and galleries entered were recorded.

This study served as the basis for my preliminary study into movement patterns. On the level of patterns, it was extremely useful. There was, however, a problem with the particular format used: it lacked a unified manner of data collection, which had the effect of making data recording difficult and which also caused raw data to separate and not be saved. By developing a single system for recording both mapped movement and verbal elaboration of that movement, the change was easily dealt with. To the extent that the change in technique (and researcher) affects data recording and perception, however, the summer data must be dealt with carefully.

The second and third studies were

also based on the tracking method and had fourteen and twenty-six visitors (respectively) as subjects. For these studies, a plan of the entire museum was laid out on three sheets with additional room for written comments (see Appendix C). Movement was recorded directly on the maps. By this means, every place a visitor stopped could be recorded on a plan of the museum (a stop is defined as a cessation of movement), as could rambling movements (slowing down without ceasing movement) and walking movements. The space for comments allowed for verbal elaboration and the recoding of time flow data.

Before following a person his permission was obtained. This was done for two reasons: ethically a person has a right to know if he is being observed; and, pragmatically, in a museum the size of the MFA, it would be virtually impossible to follow someone

without being discovered. The decision to seek permission, however, raises two important theoretical problems, the first having to do with the selection of subjects and the second having to do with the process of following them.

The problem associated with the selection of subjects was raised by Arthur Melton during his studies of museums:

Theoretically, the response of a museum visitor can be recorded by any by-stander without requiring the co-operation of the visitor. This lack of co-operation increases the difficulty of the task of observation, but it has its reward in the fact that a dangerous source of error is avoided. Whenever cooperation is a necessary factor, there is the danger of selecting for observation only those individuals who will cooperate.²⁵

To avoid this bias, subjects were selected at random from both entrances. Groups with more than three people, people coming to the museum for purposes other than to visit the galleries, and students going to art galleries for the purpose of doing a school assignment

were excluded. Aside from this only one person approached declined to be interviewed and observed, claiming lack of time as the reason.

The problem associated with the actual research technique of tracking an aware subject is a more difficult one to respond to. Robert Bechtel, in his article on "Human Movement and Architecture," makes the situation clear when he noted that

Even if it were feasible for an observer to simply follow him around to record his reactions, these reactions would likely be altered by the knowledge that he was being observed. People who know they are being studied, observed, or evaluated generally act differently when the observer is present... The museum visitor who feels he is being followed by someone, for whatever purpose, will likely move through the building in a different pattern and at a different speed than one who is not aware of being followed.²⁶

To a certain extent, this problem has to exist in an aware subject, though the degree to which it is significant can be

questioned. Returning to Robert Weiss' study, we find this issue being confronted directly by the World's Fair research. In commenting on his use of the technique of tracking people, Mr. Weiss noted that:

When we first began working with this technique a few parties were followed without their knowing it, to give us a way of deciding whether awareness of the observer made a difference in where they went or what they did. It seemed not to. Occasionally an observer would be asked for orientation, but this did not seem to affect where the parties went.²⁷

He goes on to suggest a second manner in which the experimental reliability can be checked:

Data based on this observation procedure corresponds well to other data we gathered, giving us confidence in the results obtained this way... On the basis of our sample of open space on Fair grounds, we found that between 23% and 33% of the Fair population, at any given moment in time, was apt to be uncommitted to any particular Fair activity. The observational data puts this figure at about 32%.

In general, my experiences with this technique seem to match this closely. For one thing, most of the visitors paid little

attention to me and later mentioned that they were aware of me, but that they felt that I had little effect on what they did. To check this more closely, however, the average proportion of museum of visitors that are in any given gallery was matched against the data my studies yielded. This base data was obtained from a study of gallery attendance conducted by the museum. For every collection the proportions matched very closely with the exception of the Greek Collection (my proportions being only half as large) and European paintings (my proportions being 25% larger). This difference could be due to the small sample size, to a change of patterns since the gallery study was conducted, or to experimental bias--there seems no way to determine. Still the close match that exists throughout the rest of the museum is promising.

Besides the tracking of visitors, both the second and third studies also had an interview given before the actual tour. The questions were background in nature; they sought their residence, size of group and relationship to other members of the group, occupation, education, relationship to art or music, number of previous visits (both cumulative and in last year), age, sex, and race. These were asked before the tour rather than after to provide at least a small degree of familiarity to exist between the observed and the observer. In addition to these questions, the places the visitor was most likely to visit, as well as whether he knew how to find them, were also recorded.

The two studies, however, were by no means identical. Whereas the study conducted in November was geared toward the general question of how people use and move through the museum and which factors affect that

movement, the study conducted early this year had the more specific goals of determining what environmental images a visitor forms, how maps might aid that formation and the process of way-finding, and, in a more precise manner, how the four factors isolated in the November study actually influence movement. As such, this "image" study had two additional elements besides the pre-tour interview and the tracking.

To begin with, three experimental maps (see Appendix C) were developed and tested. They were organized around three different types of environmental images: one structured by architecture, one structured by use and collection locations, and the third was left unstructured. In part, these maps were meant to be representative of the commonly used maps from different art museums throughout the U.S. (see Appendix E). More importantly, they were meant to elicit the environmental image that

visitors found most useful. As such two groups of ten visitors each were asked to use the two structured maps, while a third group of six visitors were asked to use the unstructured one.

Unlike the movement study, this image and map study was geared less towards pure research and more towards gaining the visitor's insight as a user consultant. In keeping with this idea, the visitors were told that the maps were experimental and that their opinion of them would be requested before leaving. This undoubtedly encouraged them to use the maps more often than they normally would have, but it also allowed them to sharpen their perceptions of their own movement and their use of the map.

As was previously mentioned, the "image" study was concluded by an interview in an attempt to gain deeper insights into the user's perception of the museum and the map system. Five questions were therefore asked:

1. We are trying to see what different people remember about the museum. We are particularly interested in finding out how they think the museum is organized. If you had to describe the museum to a friend who has never visited it before, what would you tell them?

2. Here is a floor plan of the museum similar to the map used during your tour (see Appendix C). Could you please put down anything, whether good or bad, art or not-art, that you remember about your tour?

3. Did you see everything you wanted to? (Point out things they said they wanted to see, but did not).

4. This fourth question was a series of clarifications that the observer sought about particular movements and behavior in their tour that he had been uncertain about.

5. In this final question, the observer presented the other maps to the visitor and sought his opinion on each.

Again, to be consistent to the idea that the visitors were user consultants, the observer sought to encourage the visitor to set forth all his ideas.

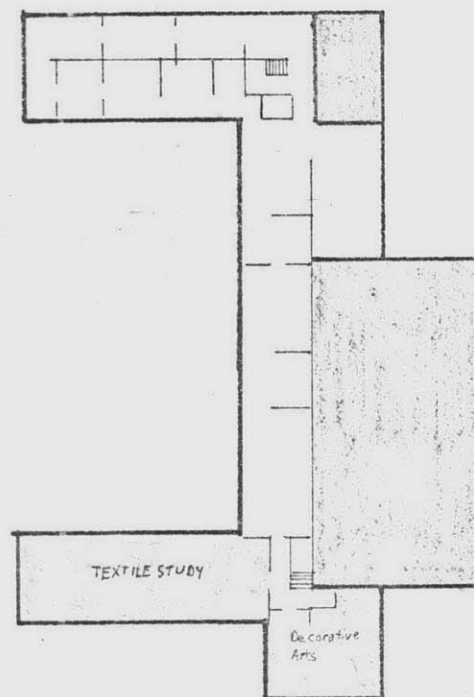
The final study was conducted at the end of March. In this study, six test locations for permanent information were observed

and visitors passing through were interviewed. These locations include the two entrances, the crypt and rotunda areas, and the first and second floor of the stairwell at 006 (which served as an example of a minor stairwell). At each of these points, it was attempted to determine the visitors need for information, as well as where this point came in their tour. To accomplish this, the following questions were asked: how long ago they had entered, how often they had been to the museum and to this section of the museum, where they had just come from, where they were going to at this moment, whether they knew how to get there, whether they knew what was in the directions they had not headed for, why they had chosen the direction they had, whether they knew how to get to either of the entrances, and, finally, whether they could pinpoint where they were on an unmarked map. Ten

interviews were conducted at each location, and the results used to deal with the question of how decisions get made and where permanent information should be located.

Appendix C
Research Tools

This appendix contains the tools constructed to aid the researcher in studies two through four. It contains the floor plan of the museum used in tracking, the three experimental maps, the floor plan used in the image study to elicit recall of the tour, and a sample of one of the layout maps used in the final study.



COURT FLOOR

Interviewer:

Date _____ Time _____

1. residence (zip code, floor, room)

2. size of group

relationships:

3. marital status

4. occupation

5. school

major

6. formal education

7. relationship to art/music

8. previous visits

in last year

when last here

9. places most likely to visit (in order)

1

2

3

do you know how to find them

1

2

3

10. estimated age

11. sex

12. race

1a _____ 1b _____

2a _____ 2b _____

3 _____ 3 _____

4 _____ 4 _____

5a _____ 5b _____

5c _____ 5c _____

6 _____ 6 _____

7 _____ 7 _____

8 _____ 8a _____

9b _____ 9b _____

10 _____ 10 _____

11 _____ 11 _____

12 _____ 12 _____

12a _____ 12a _____

12b _____ 12b _____

12c _____ 12c _____

12d _____ 12d _____

12e _____ 12e _____

12f _____ 12f _____

12g _____ 12g _____

12h _____ 12h _____

12i _____ 12i _____

12j _____ 12j _____

12k _____ 12k _____

12l _____ 12l _____

12m _____ 12m _____

12n _____ 12n _____

12o _____ 12o _____

12p _____ 12p _____

12q _____ 12q _____

12r _____ 12r _____

12s _____ 12s _____

12t _____ 12t _____

12u _____ 12u _____

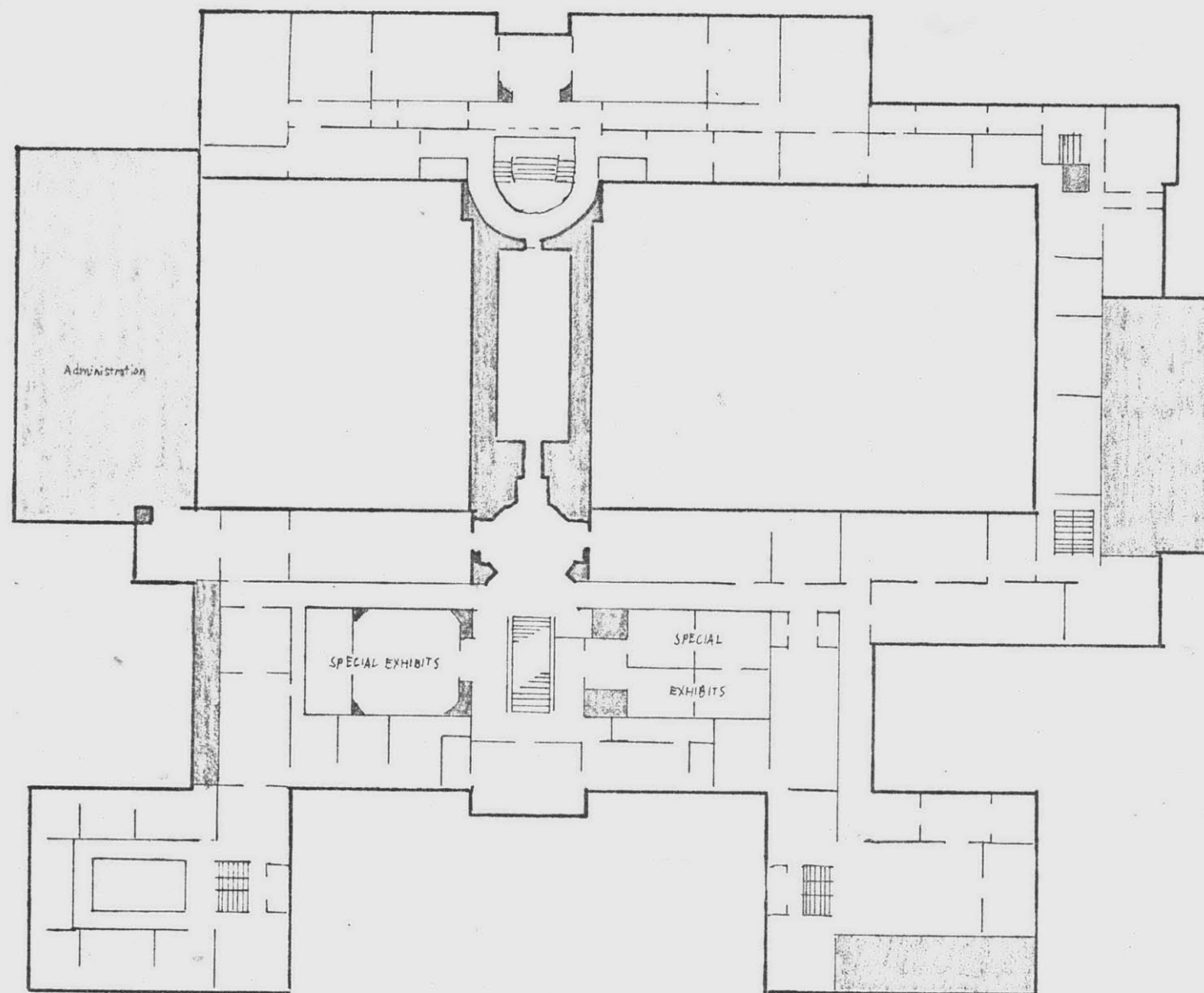
12v _____ 12v _____

12w _____ 12w _____

12x _____ 12x _____

12y _____ 12y _____

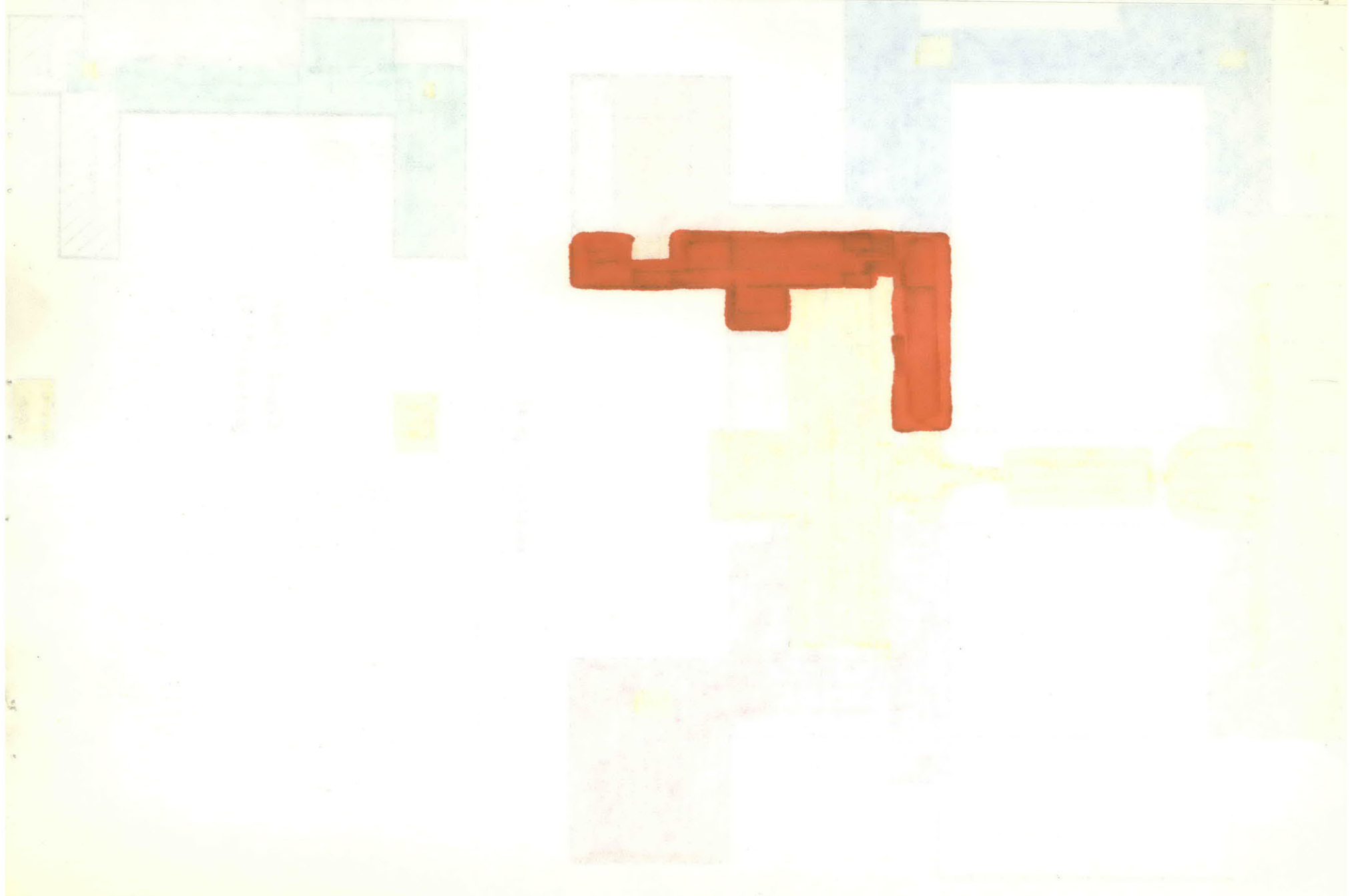
12z _____ 12z _____

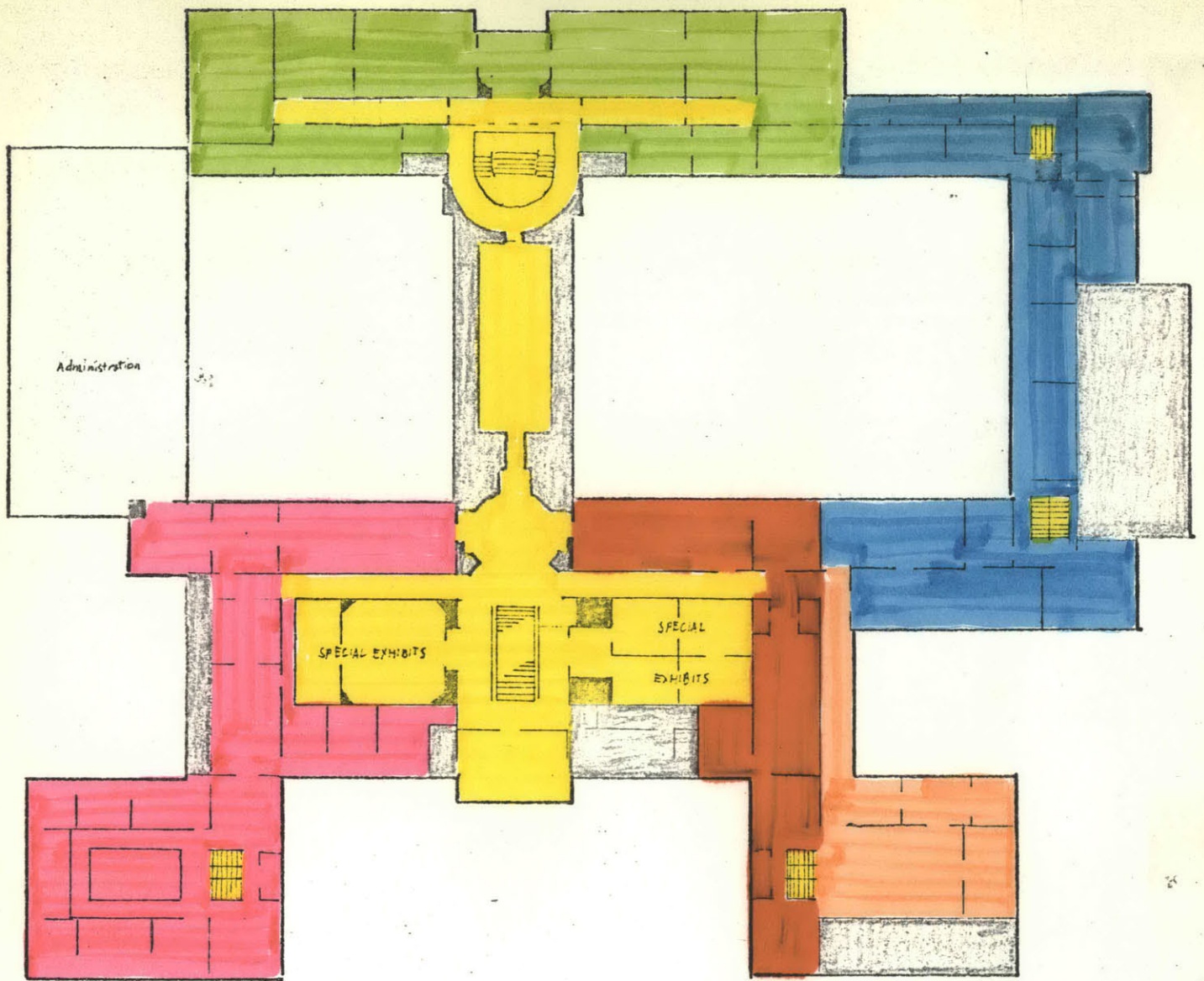


MAIN FLOOR (2nd)

MUSEUM OF FINE ARTS

BOSTON • MASSACHUSETTS • 02115



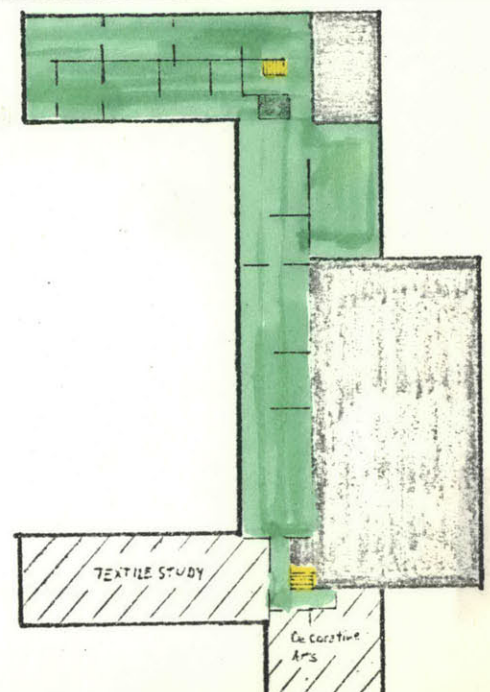


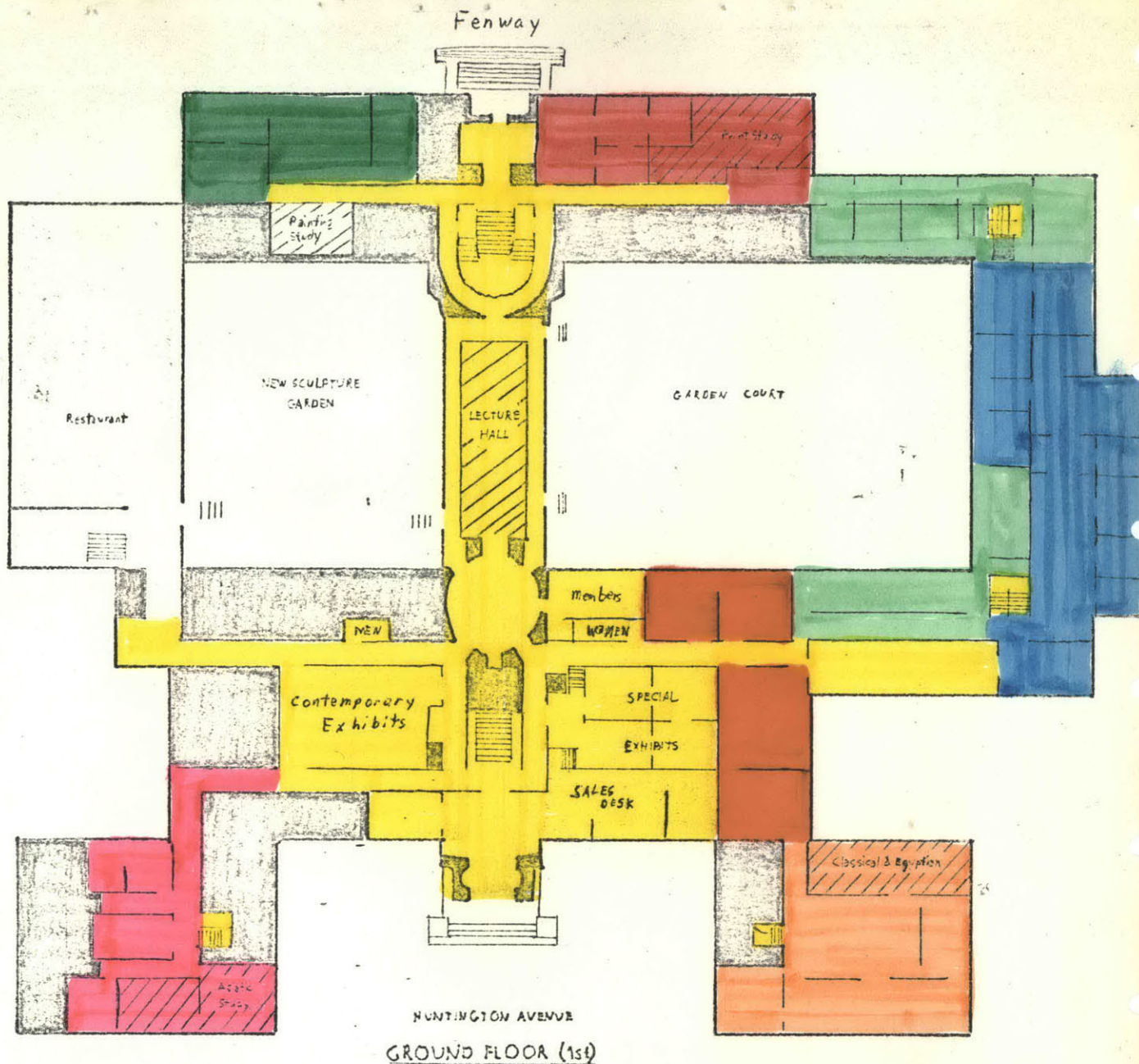
MAIN FLOOR (2nd)

child's
room

Count Floor
(basement: 0)

MUSIC
room





GENERAL SECTIONS

Corridors
Visitor Services
Special Exhibits

ASIAN ART

Islamic
Indian
Chinese

EGYPTIAN

Sculpture
Tombs
Jewelry

GREEK-ROMAN

Vases
Sculpture
pre-Greek

PRINTS

prints
posters
etchings

AMERICAN PAINTINGS

Colonial
19th century
modern

EUROPEAN PAINTINGS

Impressionism
Medieval/Ren./Baroque
17th-19th centuries

EUROPEAN DECORATIVE ARTS

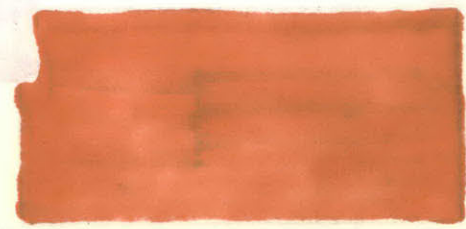
English/French
Renaissance/Baroque
Medieval

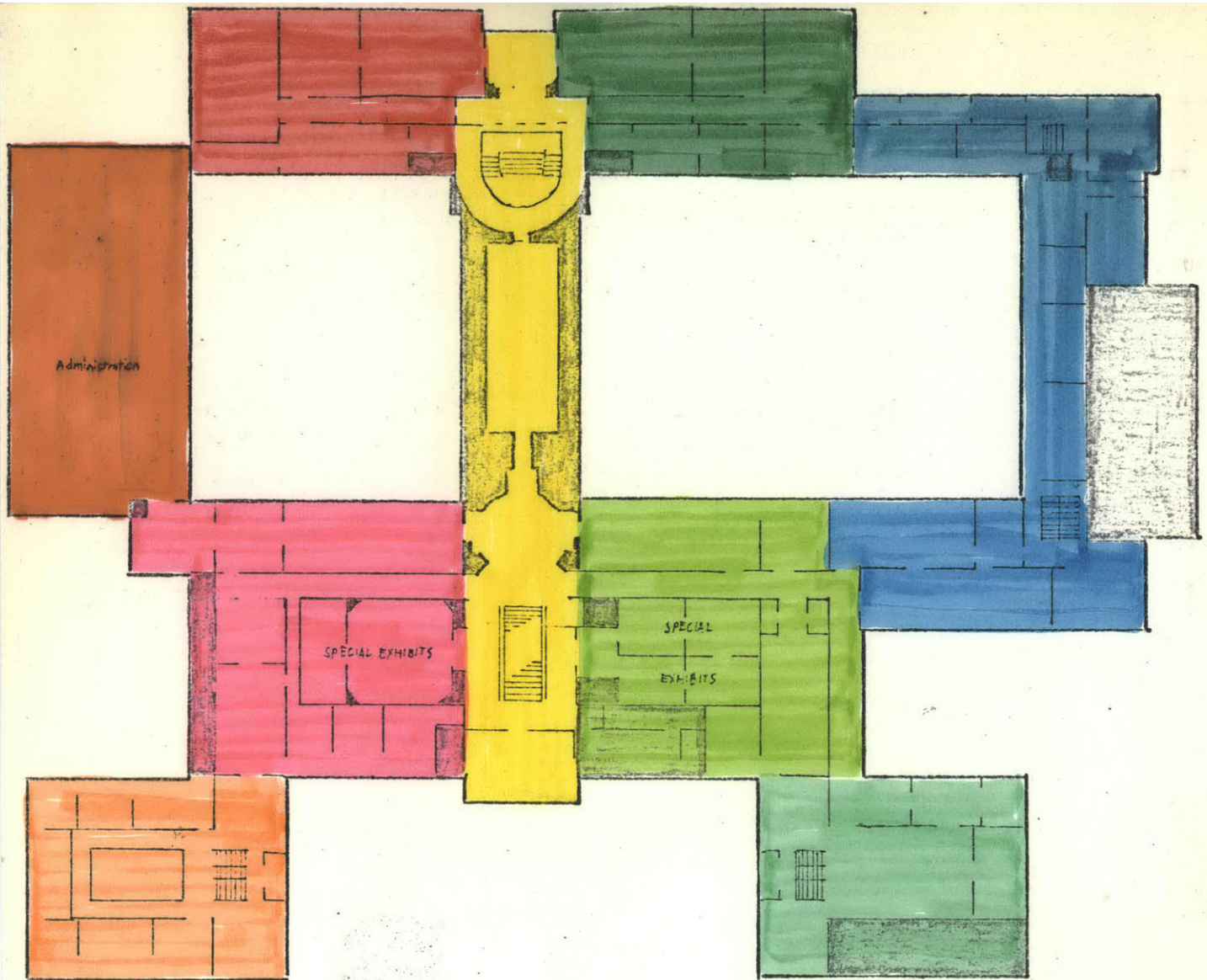
AMERICAN DECORATIVE ARTS

Colonial Folk Art
furniture/period rooms
sculpture

MUSEUM OF FINE ARTS

<p>Inventory number Title-Date-loc. Accession no.</p>	<p>Description Date, loc., Accession no.</p>	<p>Exhibition Date, loc., Accession no.</p>	<p>Notes Date, loc., Accession no.</p>	<p>Remarks Date, loc., Accession no.</p>
<p>1910-1911 1911-1912 1912-1913</p>	<p>1910-1911 1911-1912 1912-1913</p>	<p>1910-1911 1911-1912 1912-1913</p>	<p>1910-1911 1911-1912 1912-1913</p>	<p>1910-1911 1911-1912 1912-1913</p>





MAIN FLOOR (2nd)

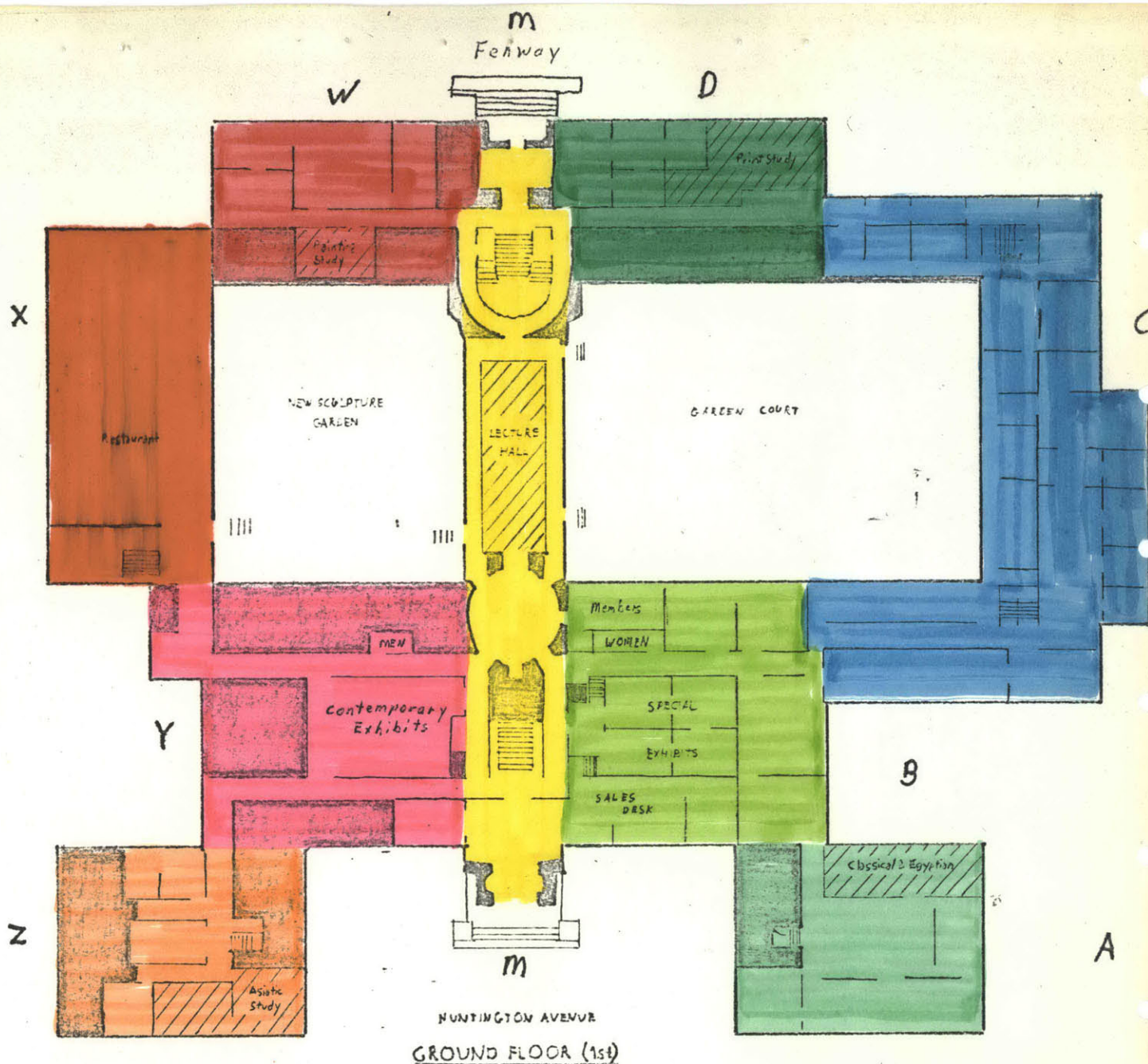
D	C	B	A
	Decorative Arts American		
Prints Posters Etchings	Decorative Art: American English	Sales Desk Special Exhibit Egyptian Greek	Greek: vases sculpture
European Painting 17th-19th cent. Impressionism	Decorative Art: English/Fren. Rennaissance Medieval	Special Exhibit Egyptian Greek-Roman	Greek Roman Egyptian

Court floor: (0)

music

TEXTILE STUDY

Decorative Art



section	Z	Y	X	W	M
floor 0					Music Room Children's Room
floor 1	Asian Art: Japanese Korean	Japanese Art Contemporary Exhibits	Restaurant	American Painting 19th century Modern	Colonial American Egyptian Crypt
floor 2	Asian Art: Chinese	Special Exhibits Asian Art: Chinese Islamic Indian	Administration	European Painting Medieval Renaissance Baroque	Special Exhibits Impressionism Tapestry Room

MUSEUM OF FINE ARTS

BOSTON · MASSACHUSETTS · 02115

MUSEUM OF FINE ARTS: DIRECTORY

1. Special Sections

- a. Visitor Information--1st: B
- b. Rest Rooms--1st: 47,50
- c. Sales Desk--1st: C
- d. Restaurant--1st: 58
- e. Special Exhibits--1st: 49,51; 2nd: A,B,C
- f. Music Room--basement: 17 (stairs in Sales Desk)
- g. Children's Room--basement: 16 (stairs near Fenway)

2. Asian Collection

- a. Chinese (general)--2nd: 57,58,59,66,67
- b. Chinese sculpture--2nd: 48,49,50
- c. Buddhist Temple--2nd: 63
- d. Japanese (general)--1st: 53,55; 2nd: 60,61,62,64,65
- e. Japanese garden--1st: 56
- f. Japanese Prints and Paintings--1st: 52,57
- g. Indian and S.E. Asian Art--1st: 54; 2nd: 53,54,55,56
- h. Islamic--2nd: 51,52

3. Egyptian Collection

- a. general--1st: 38,40; 2nd: 40,42,43,46
- b. mummies--1st: 39
- c. crypt, Mastabas--1st: D; 2nd: 44
- d. sculpture--2nd: 44,47
- e. jewelry--2nd: 41,45

4. Classical Europe

- a. pre-Greek--1st: 41,43
- b. Etruscan--1st: 42,44
- c. Greek vases and sculpture--1st: 45; 2nd: 36,37,38
- d. Graeco-Roman--2nd: 34,35,39
- e. Greek peasant textiles (modern)--1st: 37

5. European Painting

- a. Catalonian Chapel--2nd: 2
- b. Tapestry Room--2nd: F
- c. Medieval and Renaissance--2nd: 1,4,5,7
- d. Baroque, 17th century--2nd: 1,3,6
- e. 18th and 19th centuries--2nd: 8,9,12,14
- f. Impressionistic and Modern--2nd: 10,11,13,14,15,G,I,J

6. European Sculpture and Decorative Arts

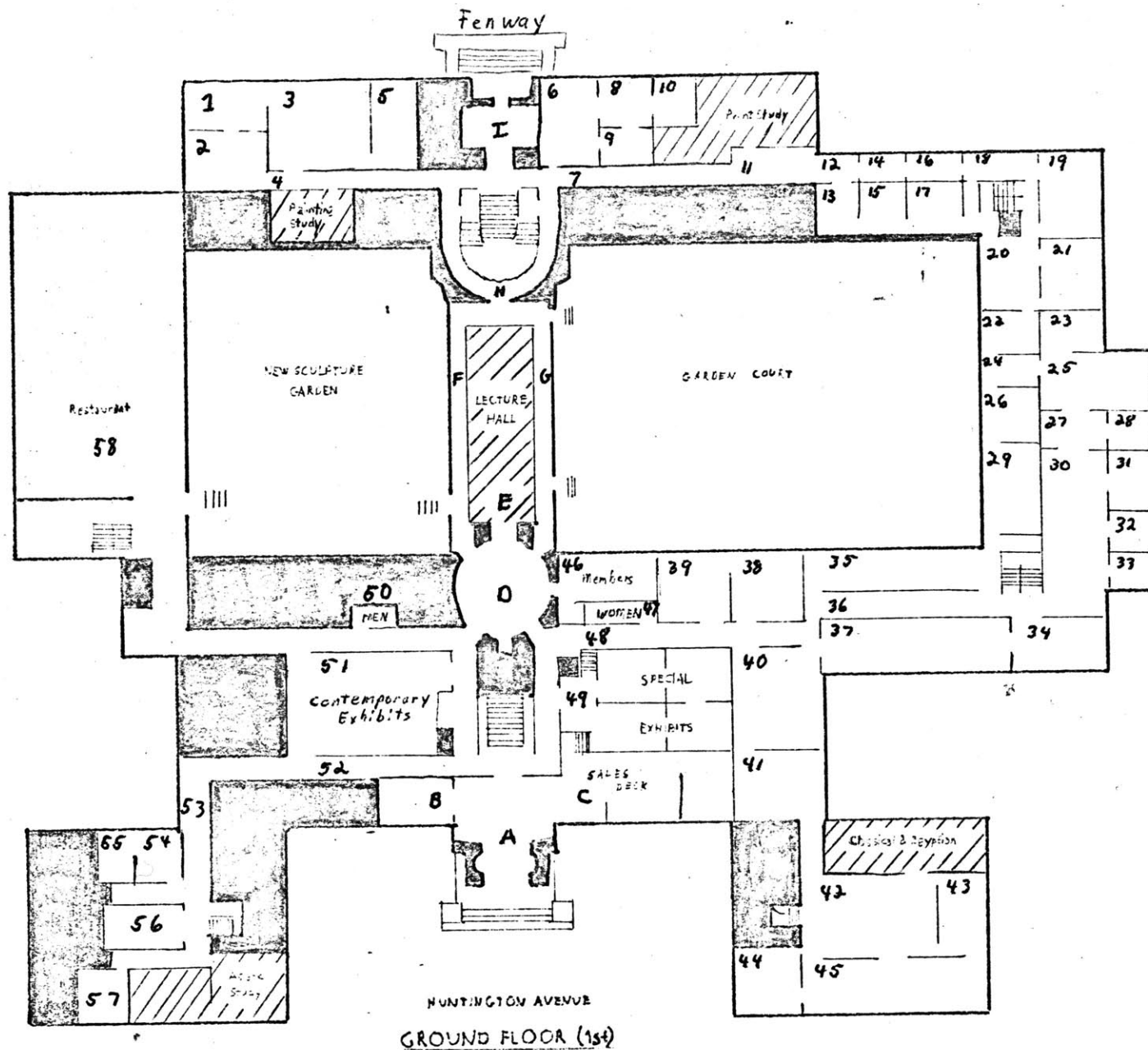
- a. Medieval--2nd: 30,31,32,33
- b. Renaissance, Baroque, and 19th cent.--2nd: 24,26,27,28,29
- c. French--2nd: 17,25
- d. English--1st: 20,21,22,24; 2nd: 20
Forsyth Wickes Collection--1st: 25,27,28,30,31,32,33
English Silver--1st: 23,24,25
- e. Pottery and Porcelain--2nd: 16,18,19,21,22,23

7. American Collection

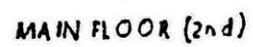
- a. Painting (18th and 19th cent.)--1st: 1,2,H,12,14,16,19
Painting (modern, with sculpture)--1st: 3,4,5
- b. silver collection--1st: 48
- c. ship models--basement: 11
- d. folk art, glass--basement: 2,6,8,10
- e. period rooms--basement: 1,3,5,12,13,14,15; 1st: 13,15,17
- f. furniture (with paintings)--basement: 4;
1st: 12,14,16,18,19,29,35,36

8. Print Collection

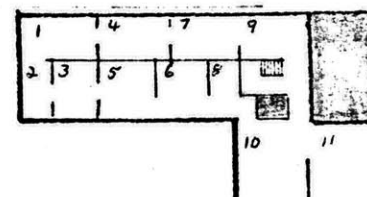
- a. 19th and 20th centuries--1st: 6,8,9,10
- b. posters and etchings--1st: 7,11

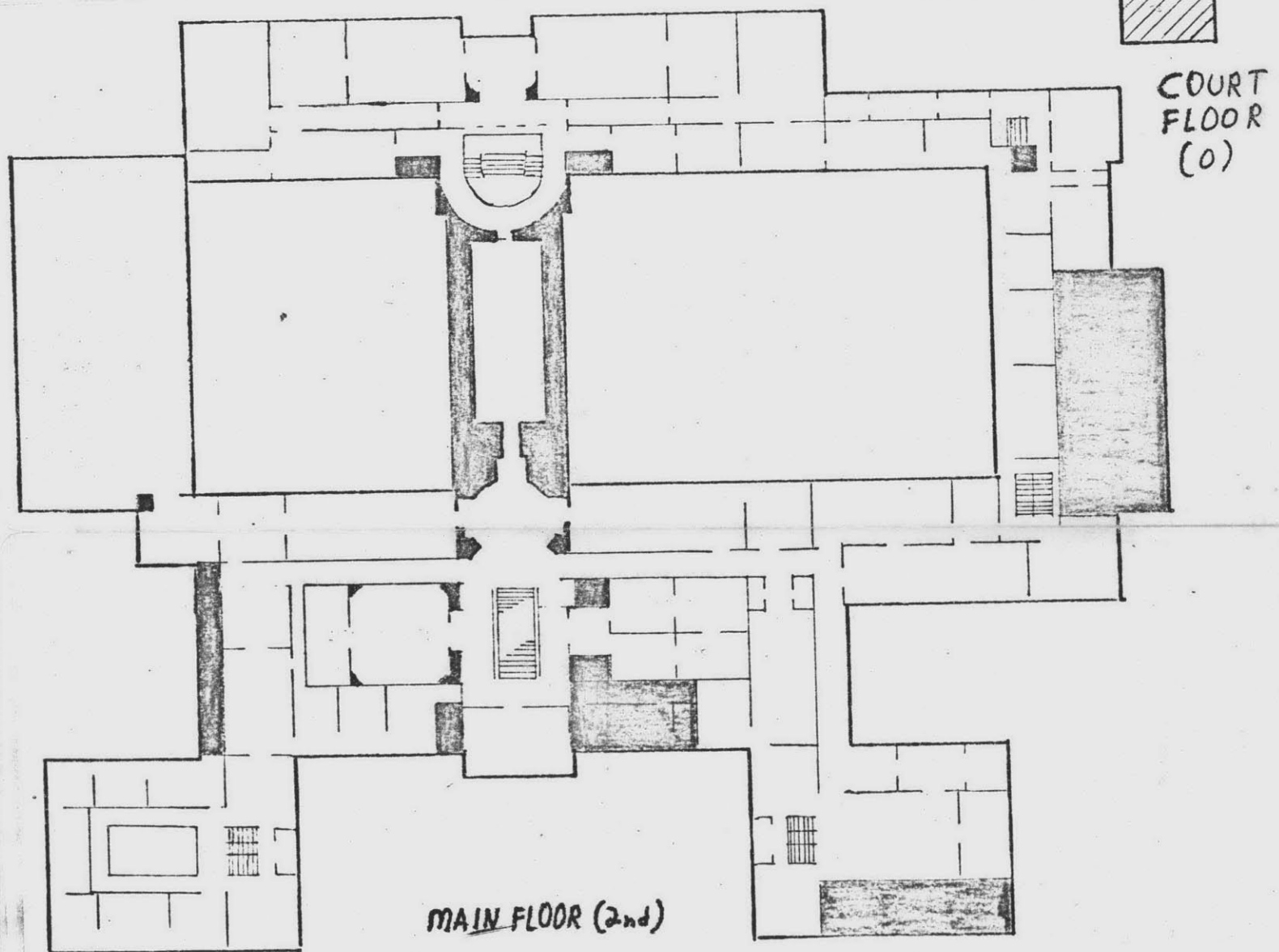
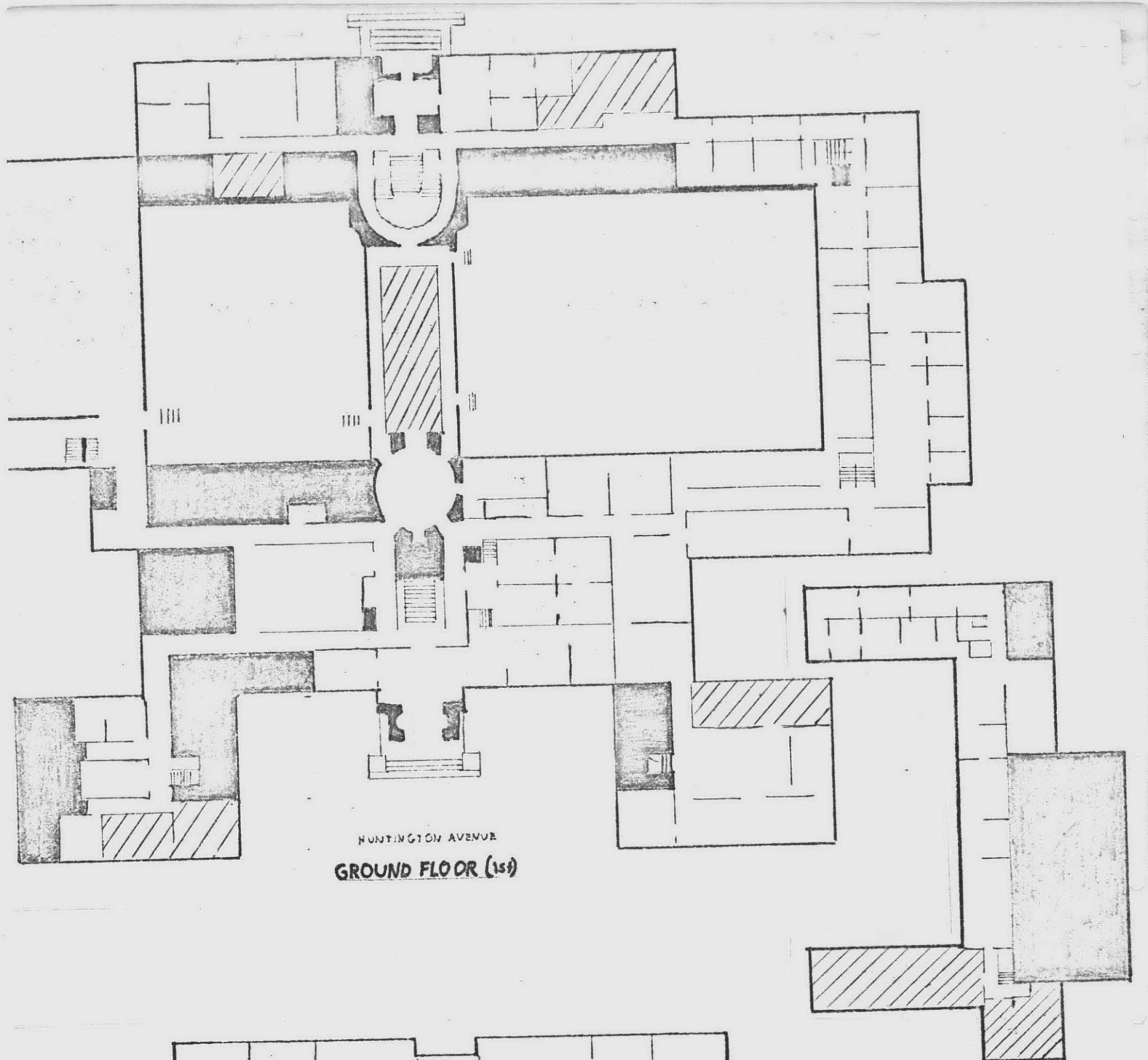


MUSEUM OF FINE ARTS



16





start:
finish:

VISITOR 1

time entered--
of visits to museum--
of visits to this section--
section come from--
section going to--
 know how to get there?--
know what is in direction not traveled?--
why did you decide to go this way?--
know how to get to Hunt. or Fen. entrance?--

show map, do you know where you are?--

VISITOR 2

time entered--
of visits to museum--
of visits to this section--
section come from--
section going to--
 know how to get there?--
know what is in direction not traveled?--
why did you decide to go this way?--
know how to get to Hunt. or Fen. entrance?--

show map, do you know where you are?--

VISITOR 3

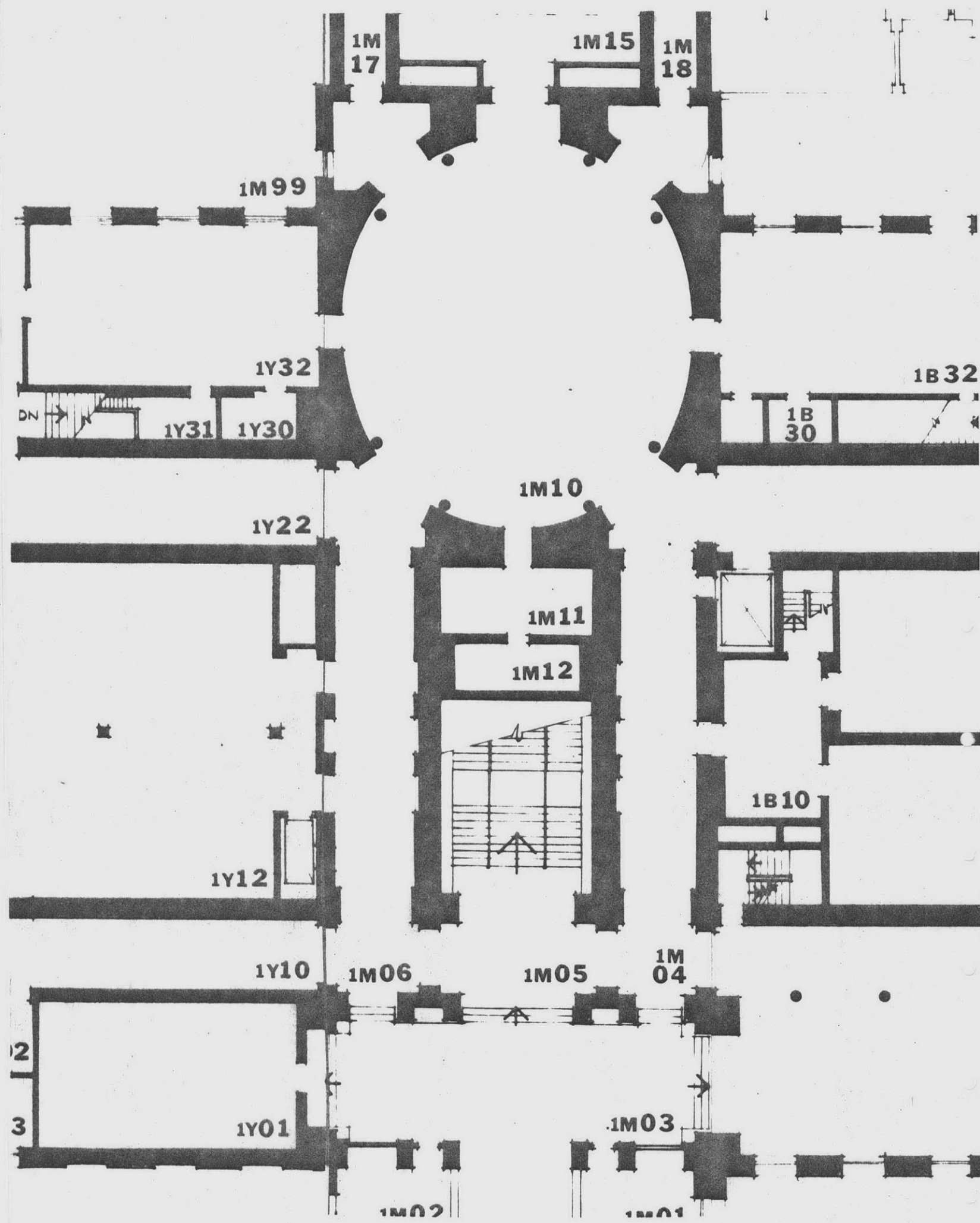
time entered--
of visits to museum--
of visits to this section--
section come from--
section going to--
 know how to get there?--
know what is in direction not traveled?--
why did you decide to go this way?--
know how to get to Hunt. or Fen. entrance?--

show map, do you know where you are?--

VISITOR 4

time entered--
of visits to museum--
of visits to this section--
section come from--
section going to--
 know how to get there?--
know what is in direction not traveled?--
why did you decide to go this way?--
know how to get to Hunt. or Fen. entrance?--

show map, do you know where you are?--



Appendix D
The Behavior of the Museum Visitor

The purpose of this appendix is to elaborate on the finding from the second and third studies. Both of these are involved in movement throughout the museum, and the following sets of data seek to summarize the important data related to the movement patterns that emerged from these studies.

As before, we will divide all data by visitors who are pre-inclined towards specific places in the museum, visitors who have mixed motives, and visitors who are casual. This data will be presented in terms of the time spent in different galleries, the non-stop movement paths, the points where visitors tend to reverse directions, and the places information is sought. All told, the two studies had thirty-eight visitors as subjects.

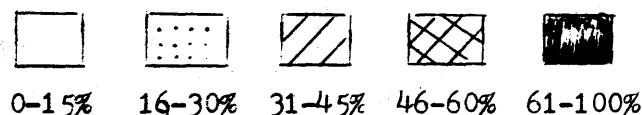
Before presenting this data, however, it would be appropriate to summarize the background data by type of visitor.

	purposeful	mixed	casual
ave. years in school	16.1.	15.4	14.2
number of previous visits	25.8	10.0	3.4
average age	25.6	31.0	27.8
residence			
Boston	.75	.33	.33
Mass.	.80	---	.22
Nor East	.17	.50	.22
other	---	.17	.22
		in proportion	

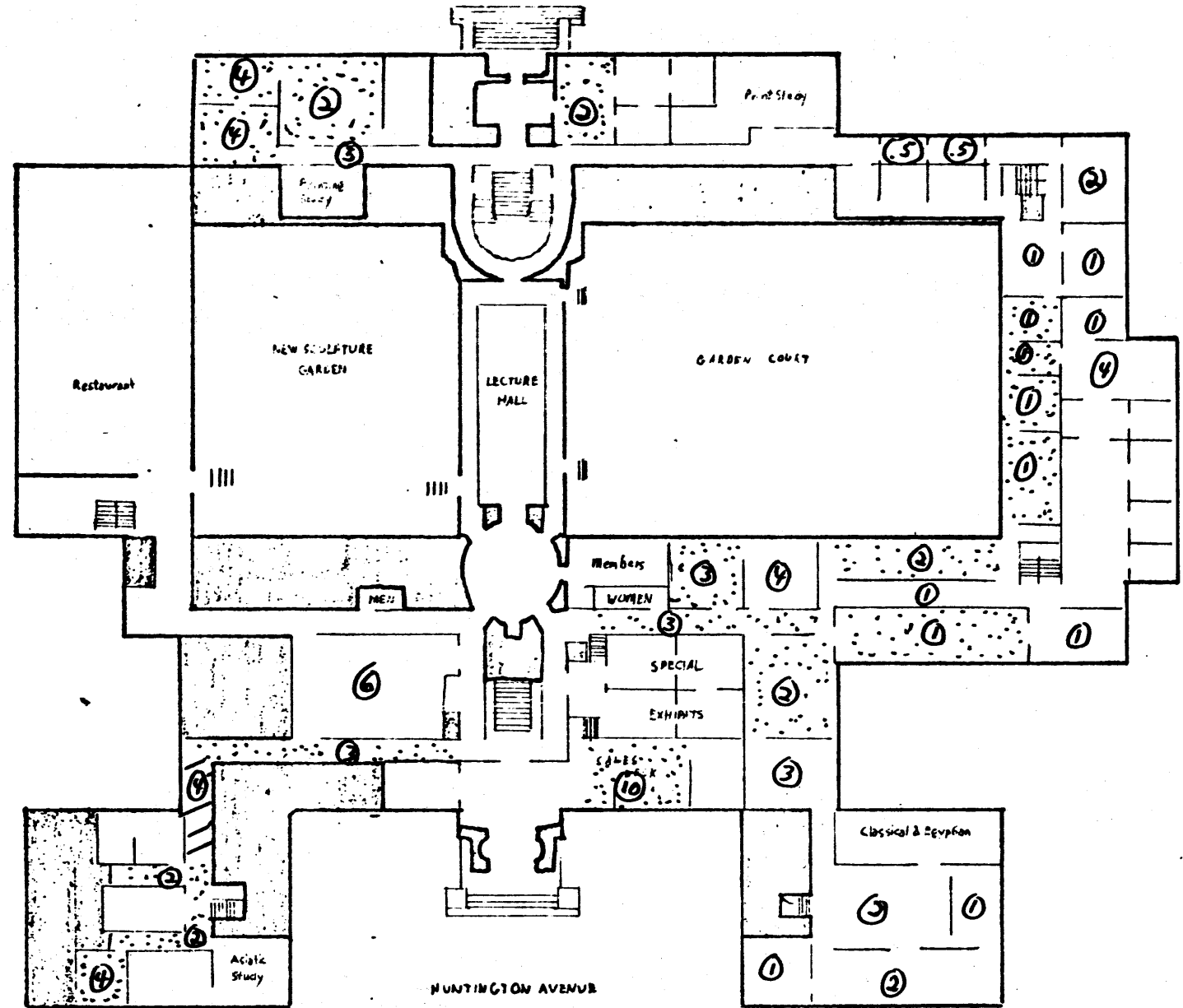
Gallery Data

The first set of diagrams present the average number of people who entered each gallery and came to a full stop at least once, together with the average time these people stayed in each gallery. This data combines the four small galleries of the special exhibit areas into one area. The coding is as follows:

Shading indicated the percentage of people studied who entered the gallery:

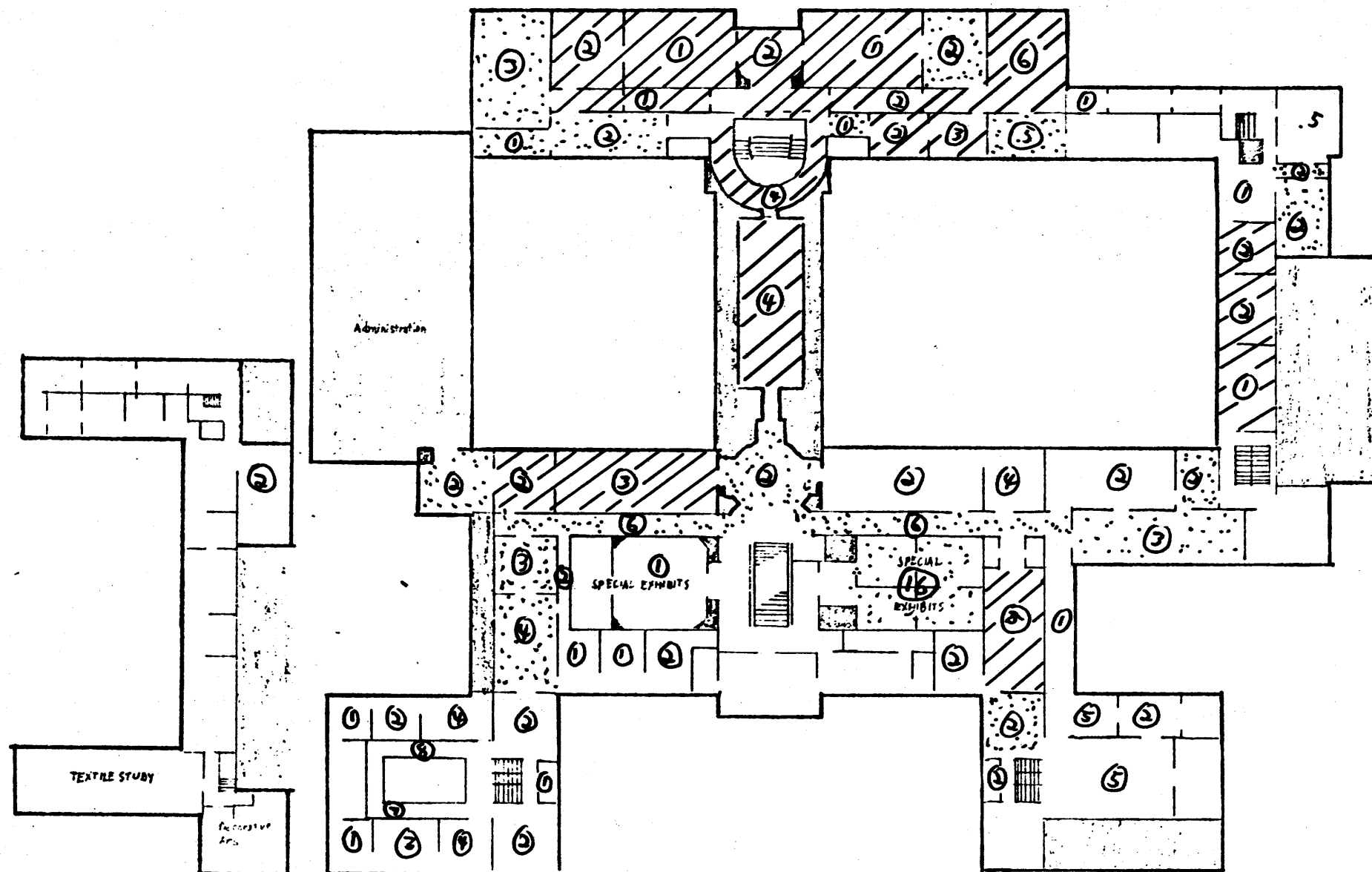


The number in the center indicated the average number of minutes spent in a gallery by those who entered it.



HUNTINGTON AVENUE
GROUND FLOOR (1st)

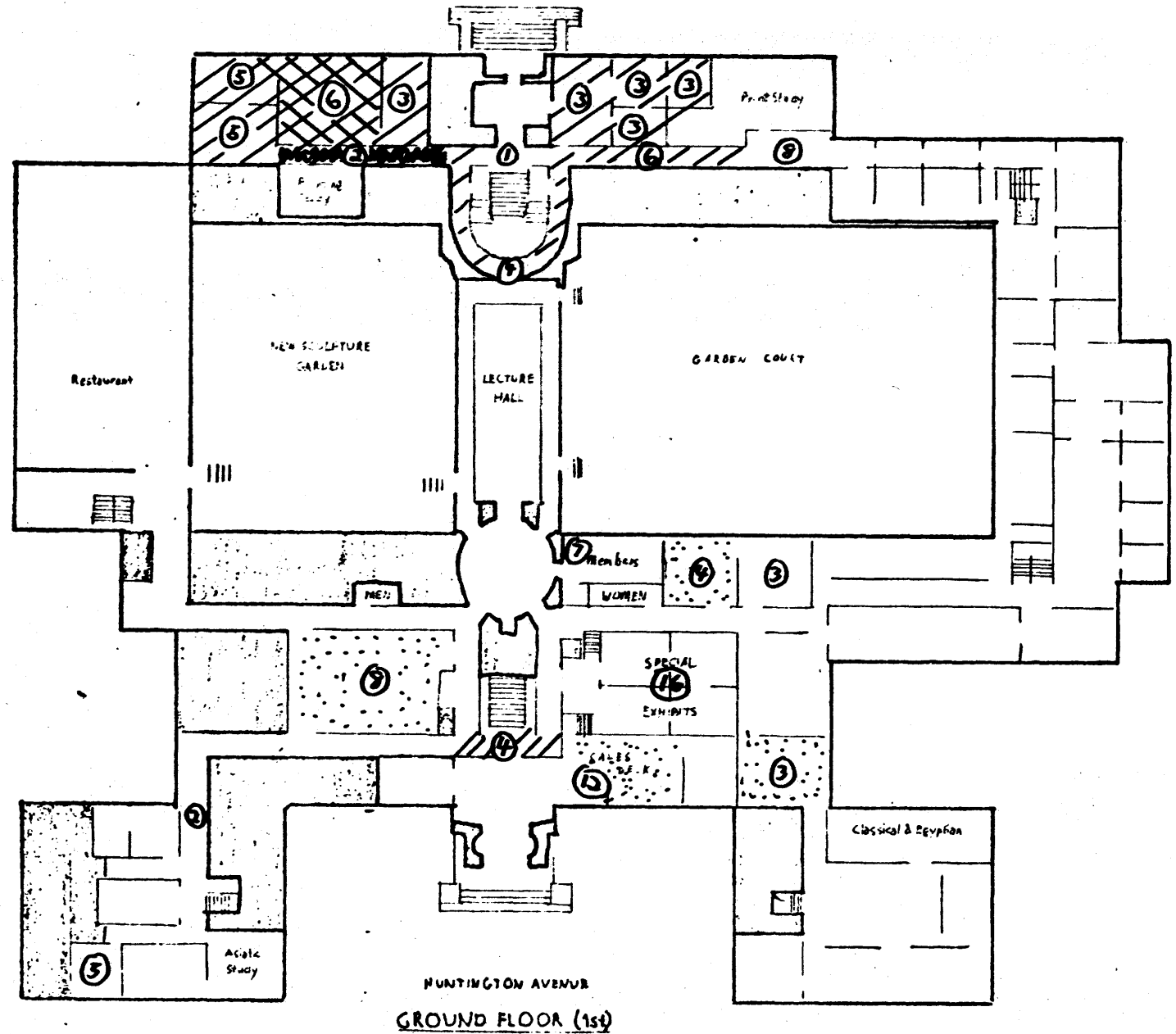
casual



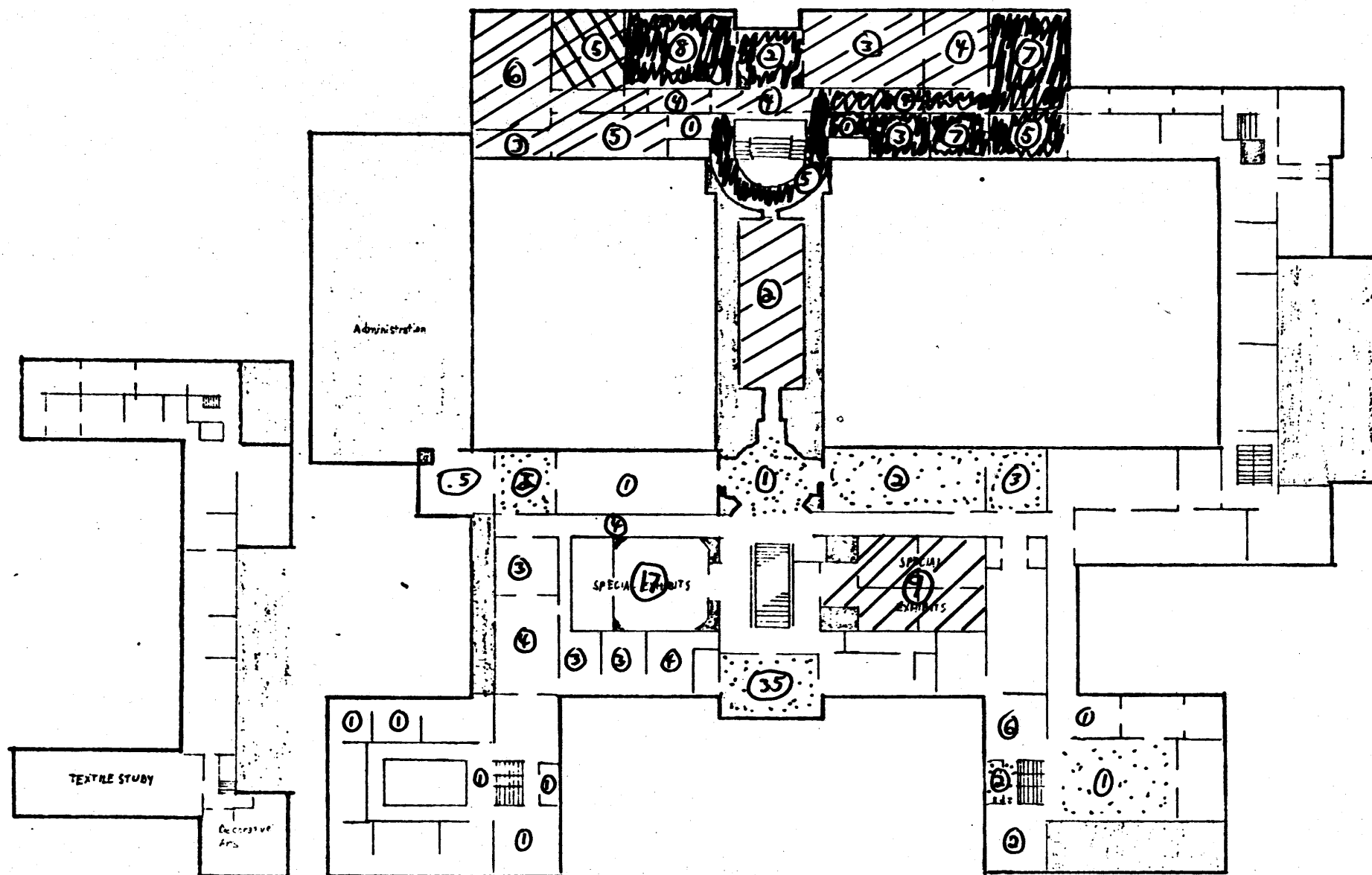
COURT FLOOR

MAIN FLOOR (2nd)

casual



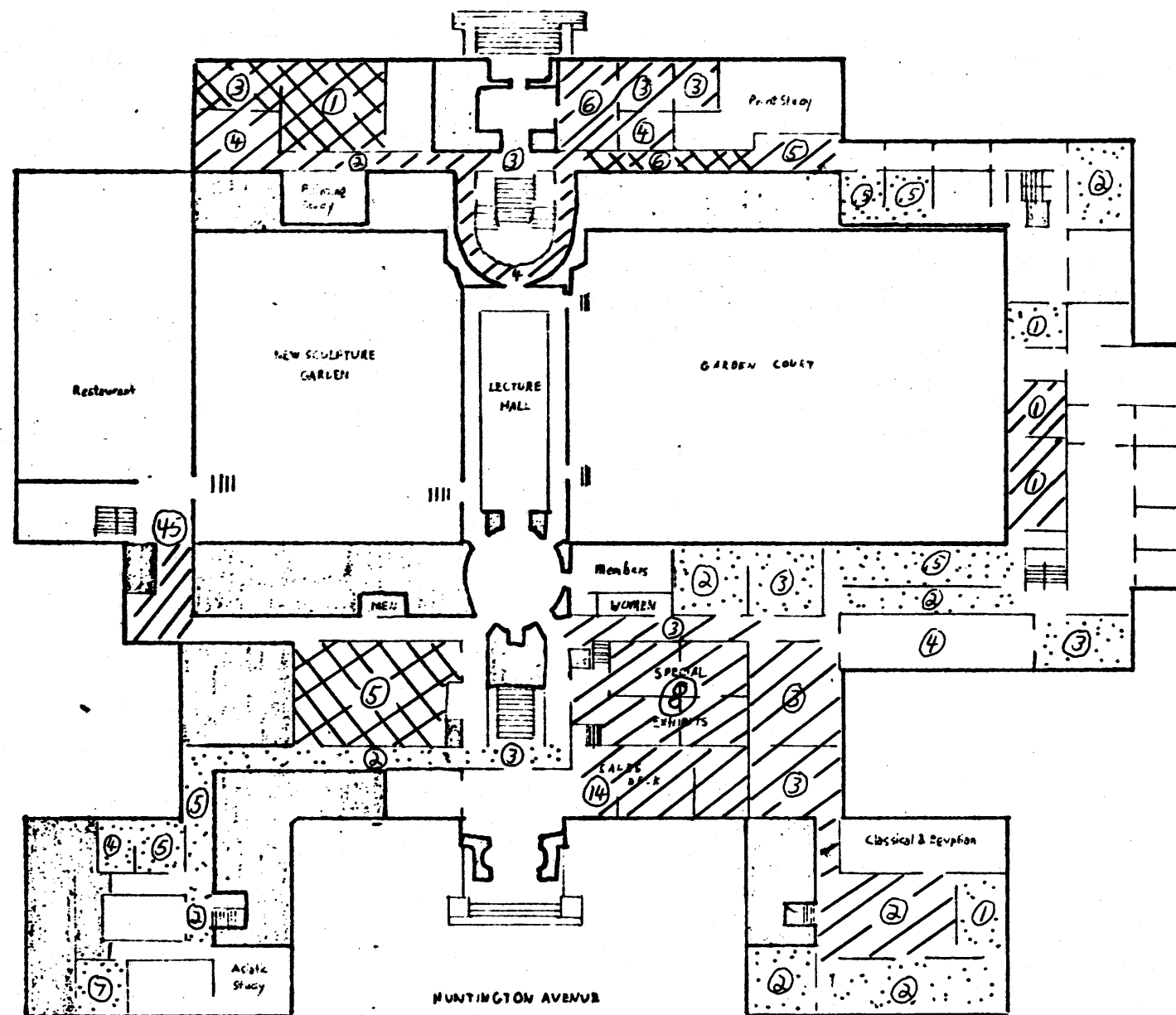
purposeful



COURT FLOOR

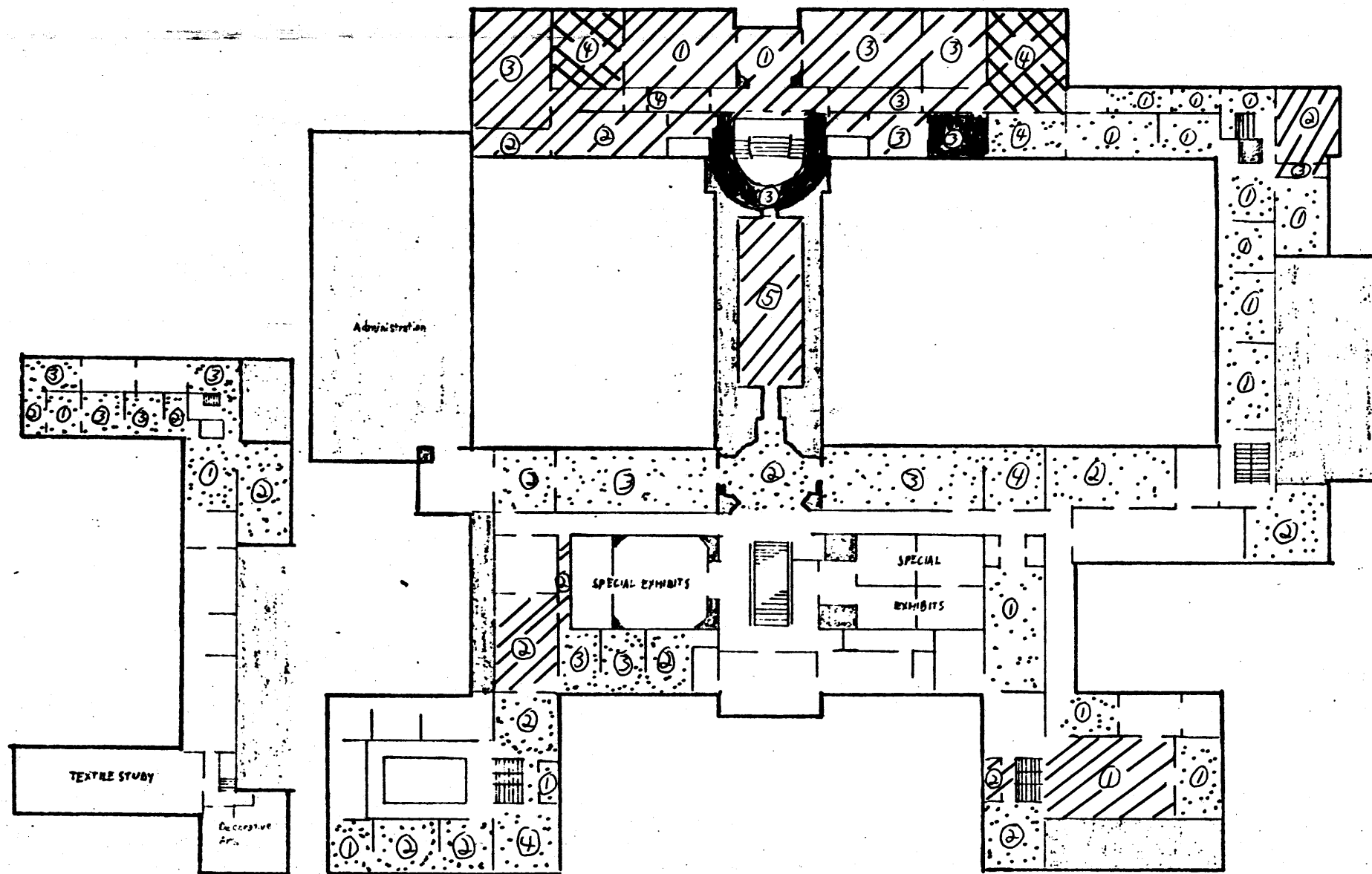
MAIN FLOOR (2nd)

purpose ful



HUNTINGTON AVENUE
GROUND FLOOR (1st)

mixed motives



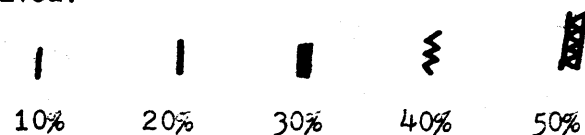
COURT FLOOR

MAIN FLOOR (2nd)

mixed motives



Continued Movement and Points of Reversal Data

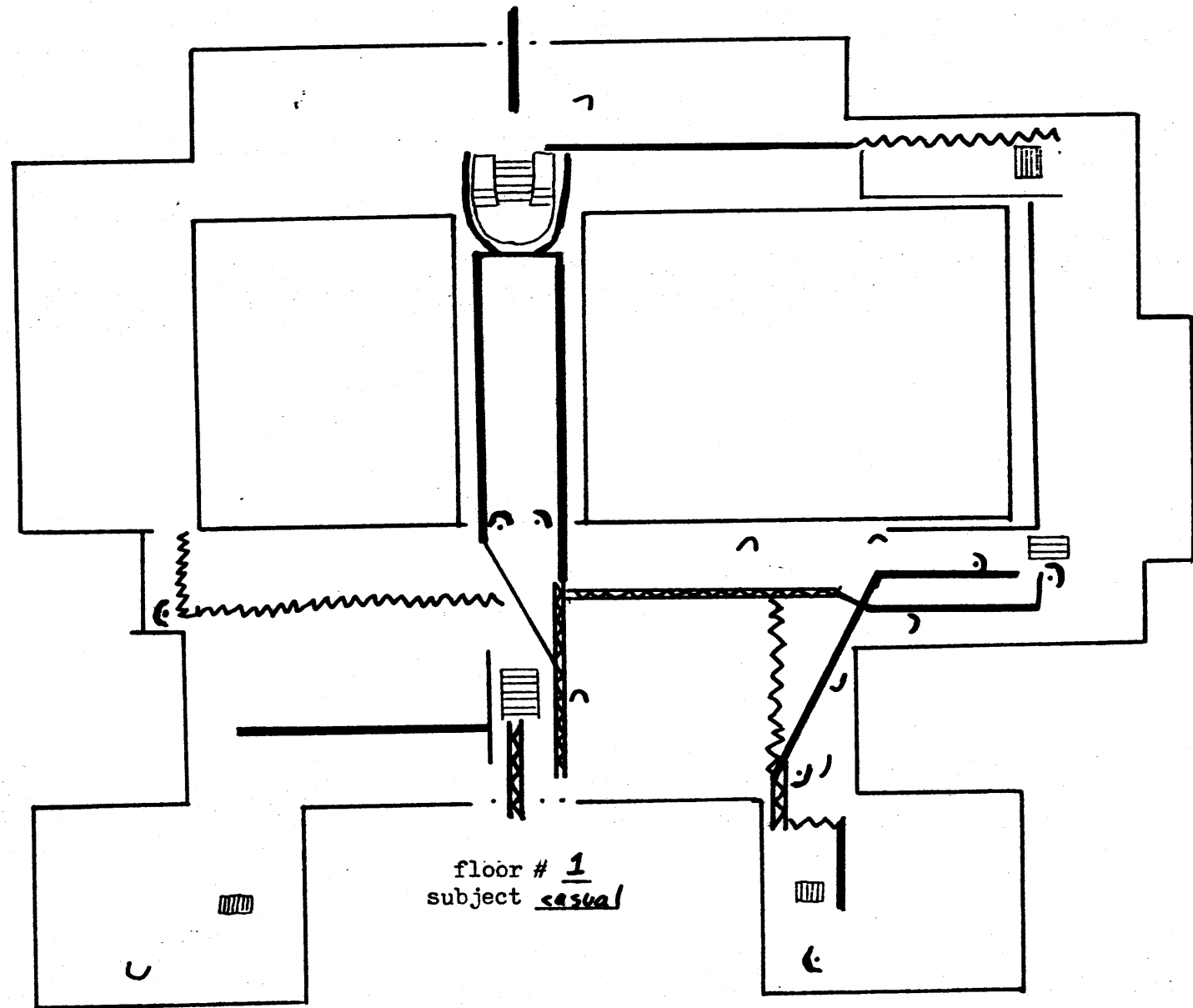
The six pages of data that follows includes the pattern of non-stop movements and those points at which a visitor reversed directions. A non-stop movement is defined as passing through an entire gallery or corridor without stopping for at least ten seconds. This is recorded as a straight line, the width of which codes the percentage of people studied involved:

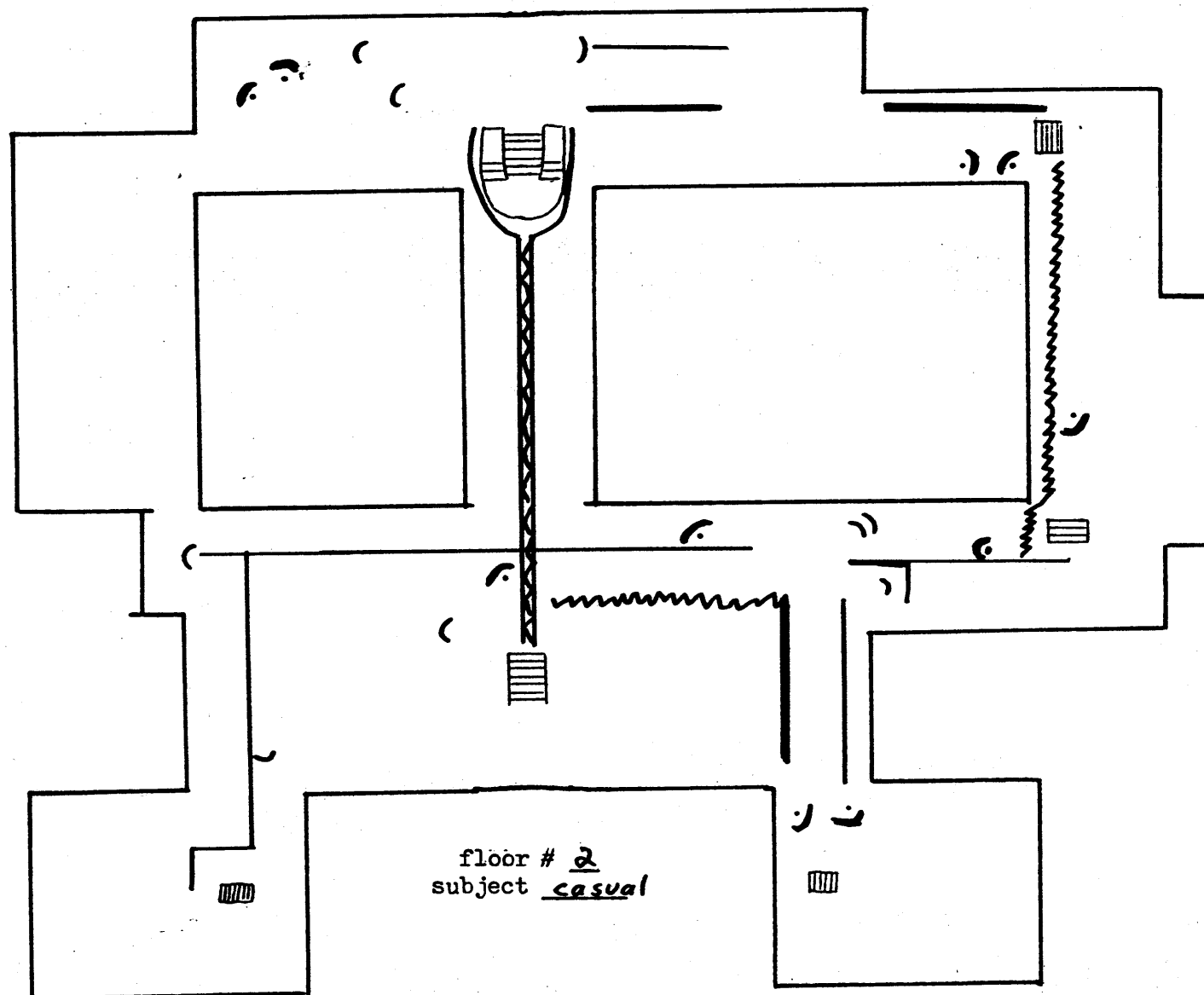


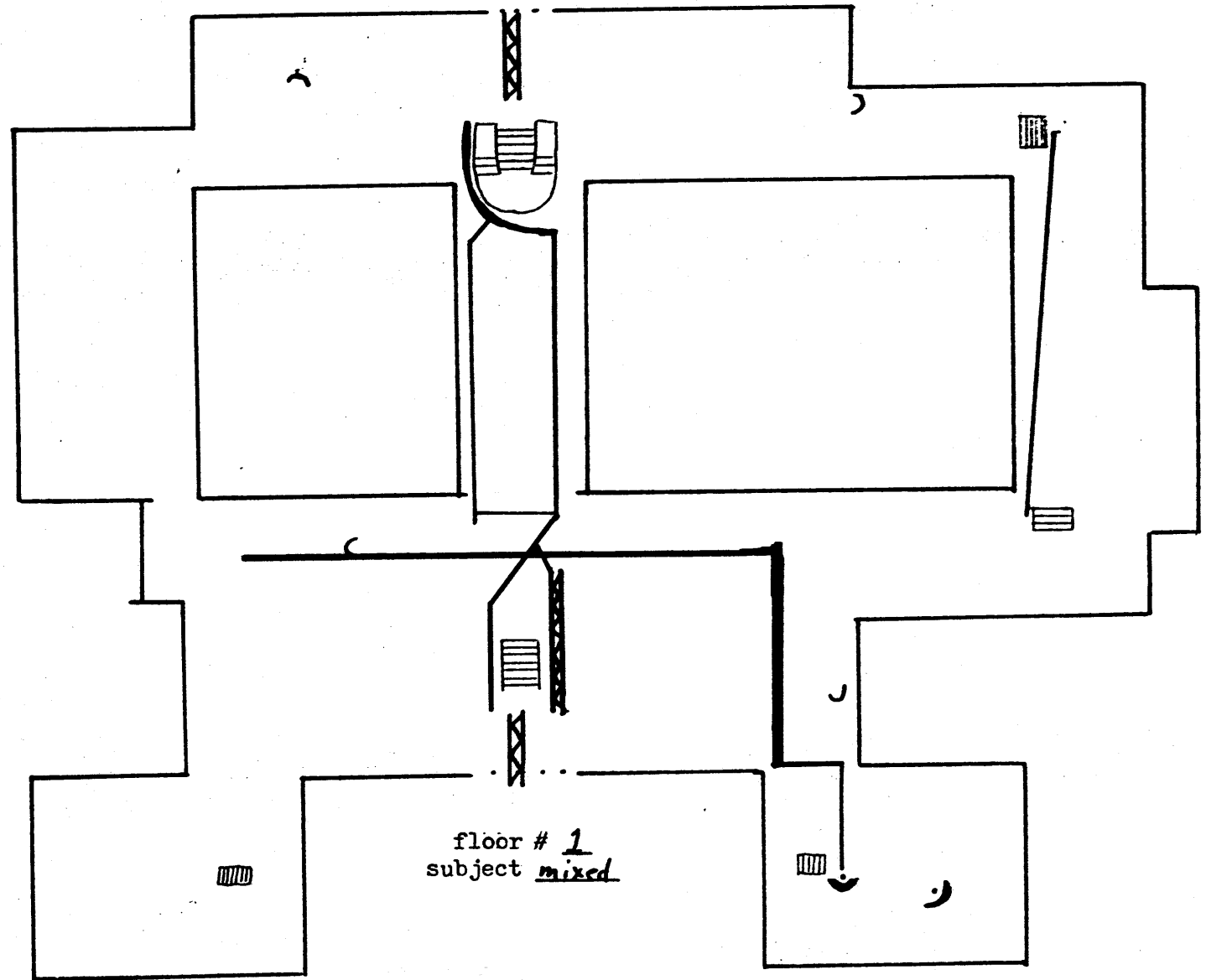
It should be noted that movement lines tend to indicate lack of interest when associated with galleries and goal orientation when associated with corridor systems.

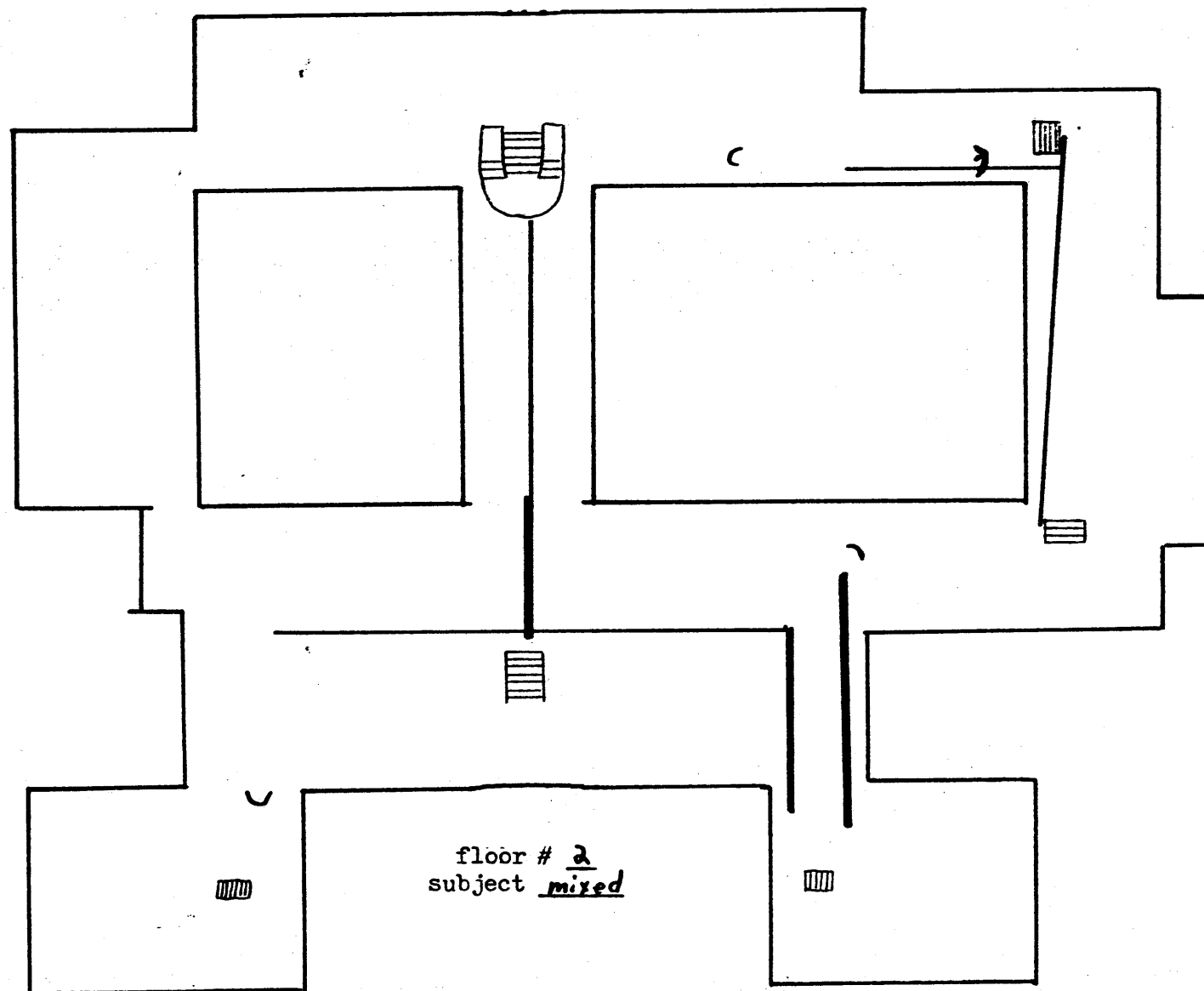
The points of reversal are coded by two types. The first is those points at which a person actually backtracks along a path he has just come over through at least two whole galleries. The second is those points at which he reverses his direction following his path for less than two galleries. This latter behavior tends to be associated with exploration activity (a typical example occurs when a visitor enters a gallery and decides he does not want to see it), while the former tends to be associated with trying to leave a collection and not being able to do so without re-tracing one's own steps. Each point recorded indicated that ten percent of the visitors reversed at that point.

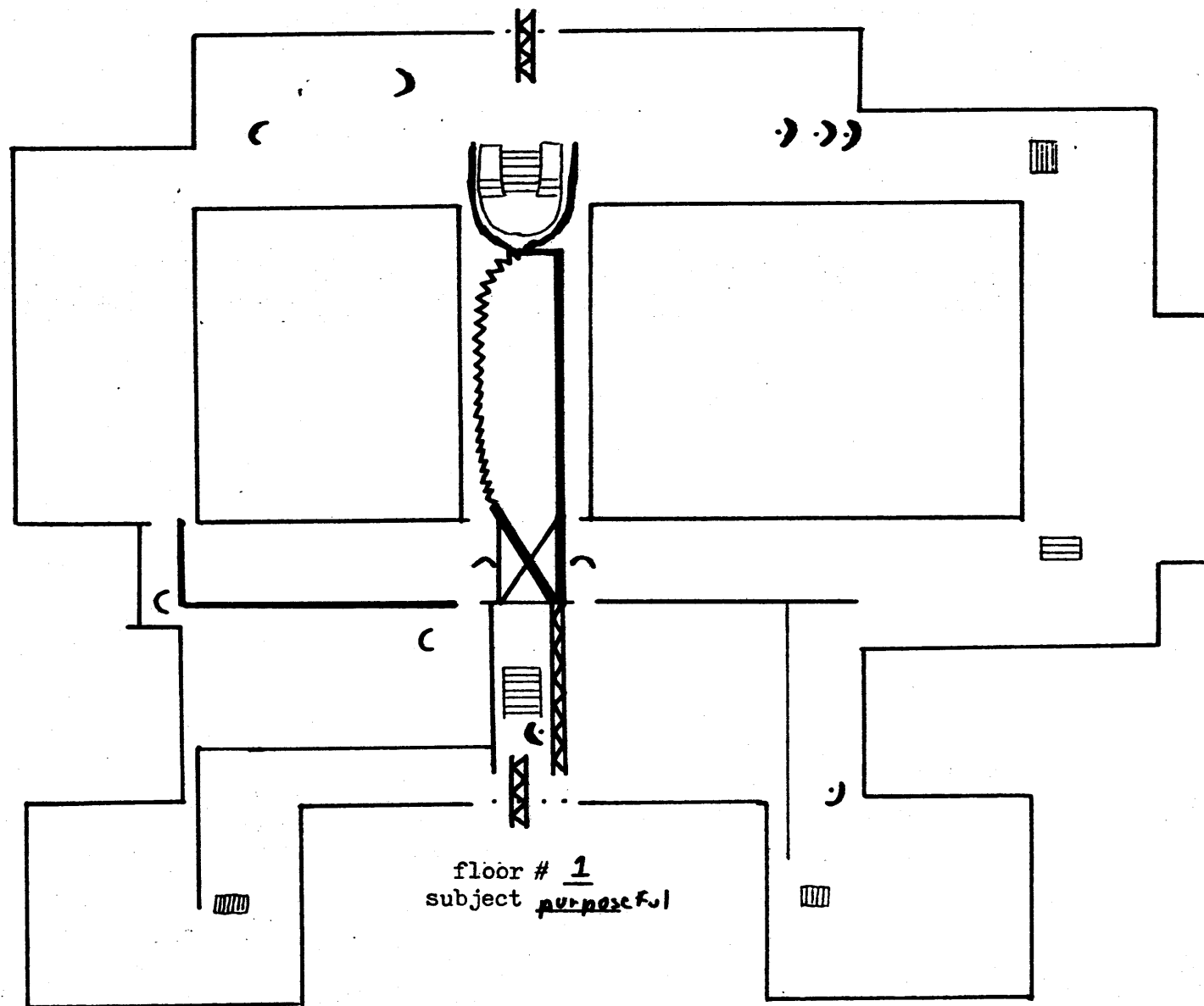
 backtracking  reversals

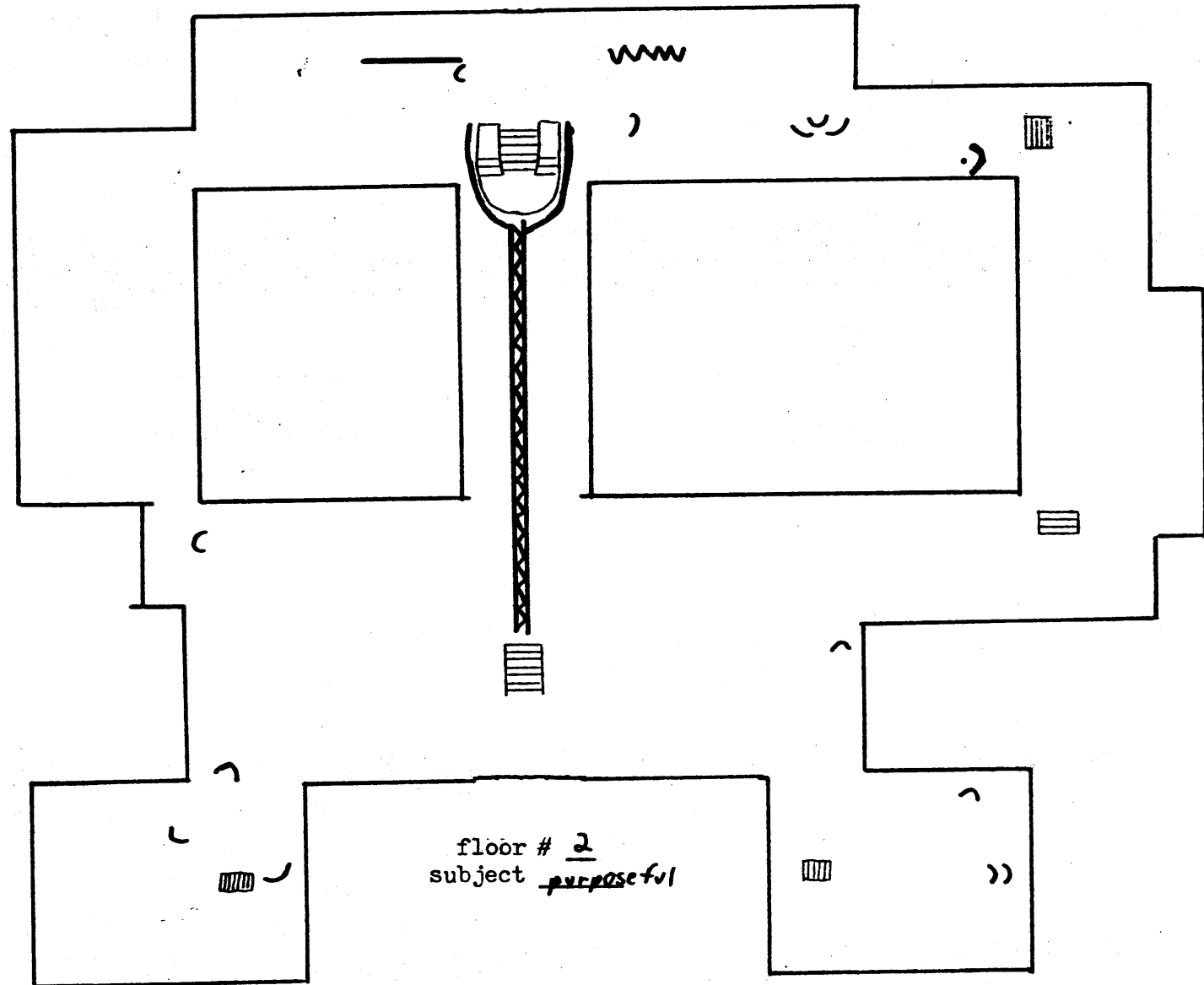










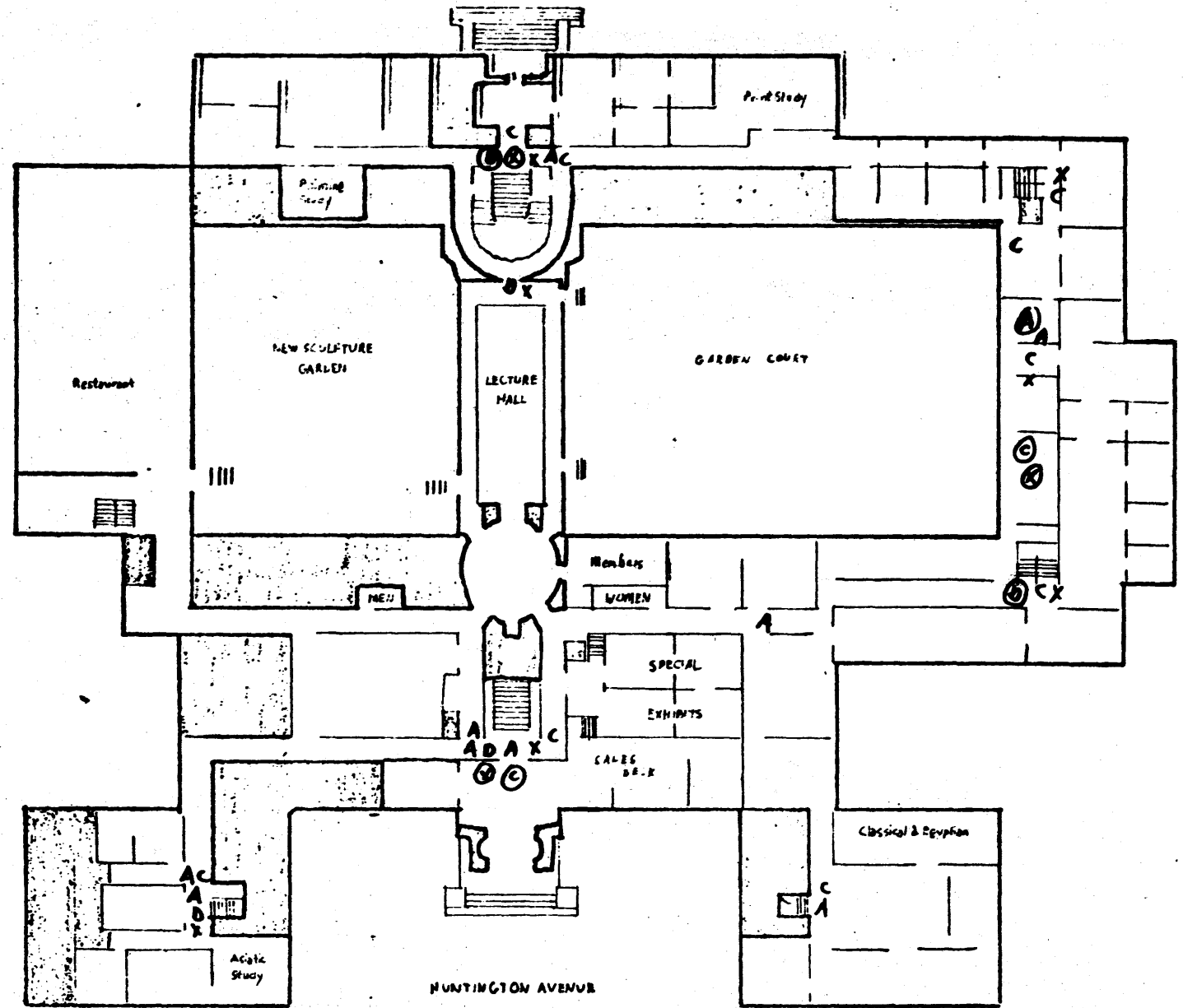


Information Seeking Activity

Each point at which information is sought is recorded by experimental condition. All data has been weighted so that there are four persons for each of the four conditions, or sixteen per sheet. The symbols are as follows:

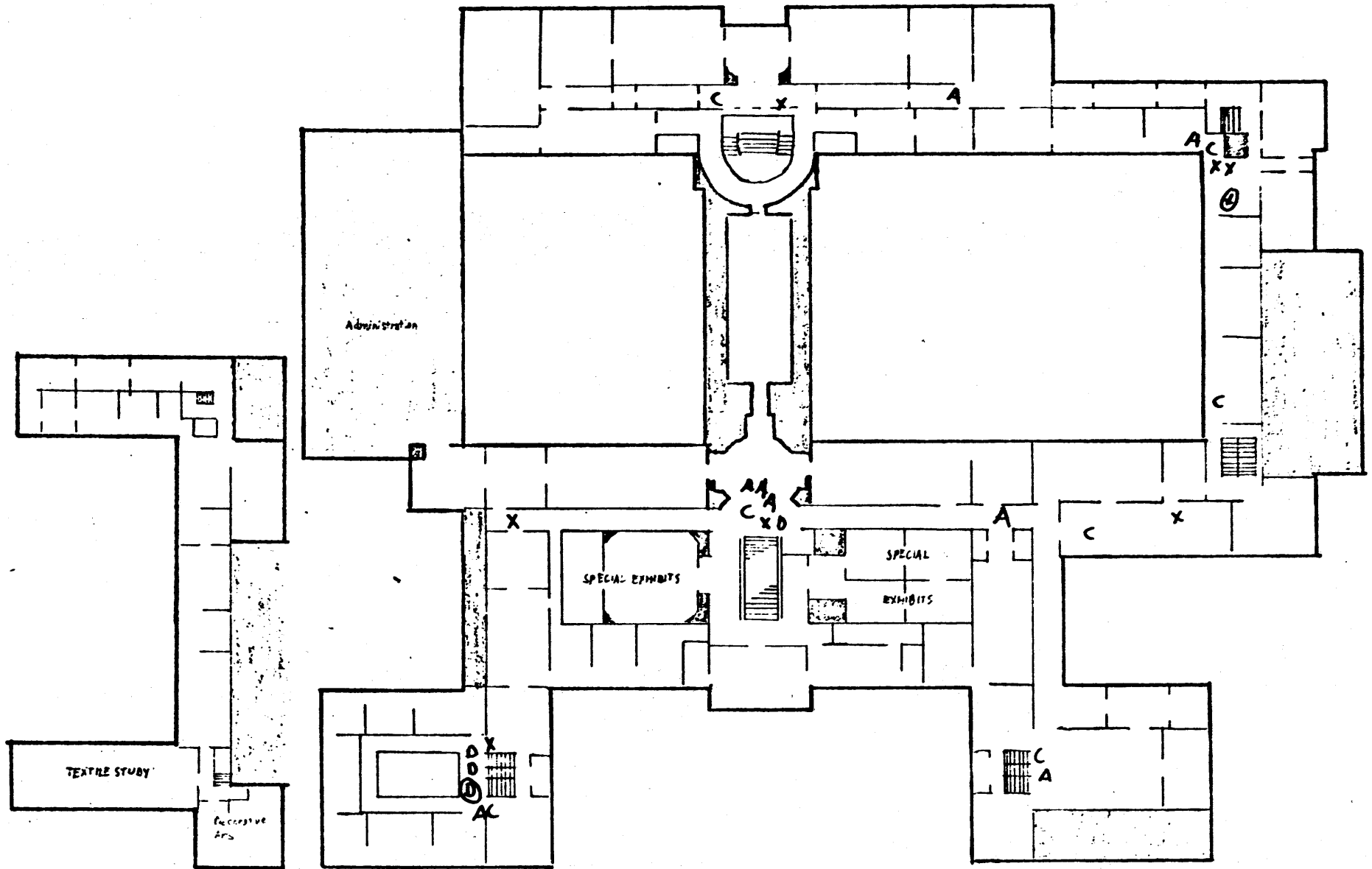
Architectural map	A	a circled symbol means the visitor
Collection map	C	asked another person for
Directory map	D	directions
open-ended group (November's untouched group)	X	

Note that weighting the data makes the data somewhat subjective at the same time that it makes the charts visually more effective.



HUNTINGTON AVENUE
GROUND FLOOR (1st)

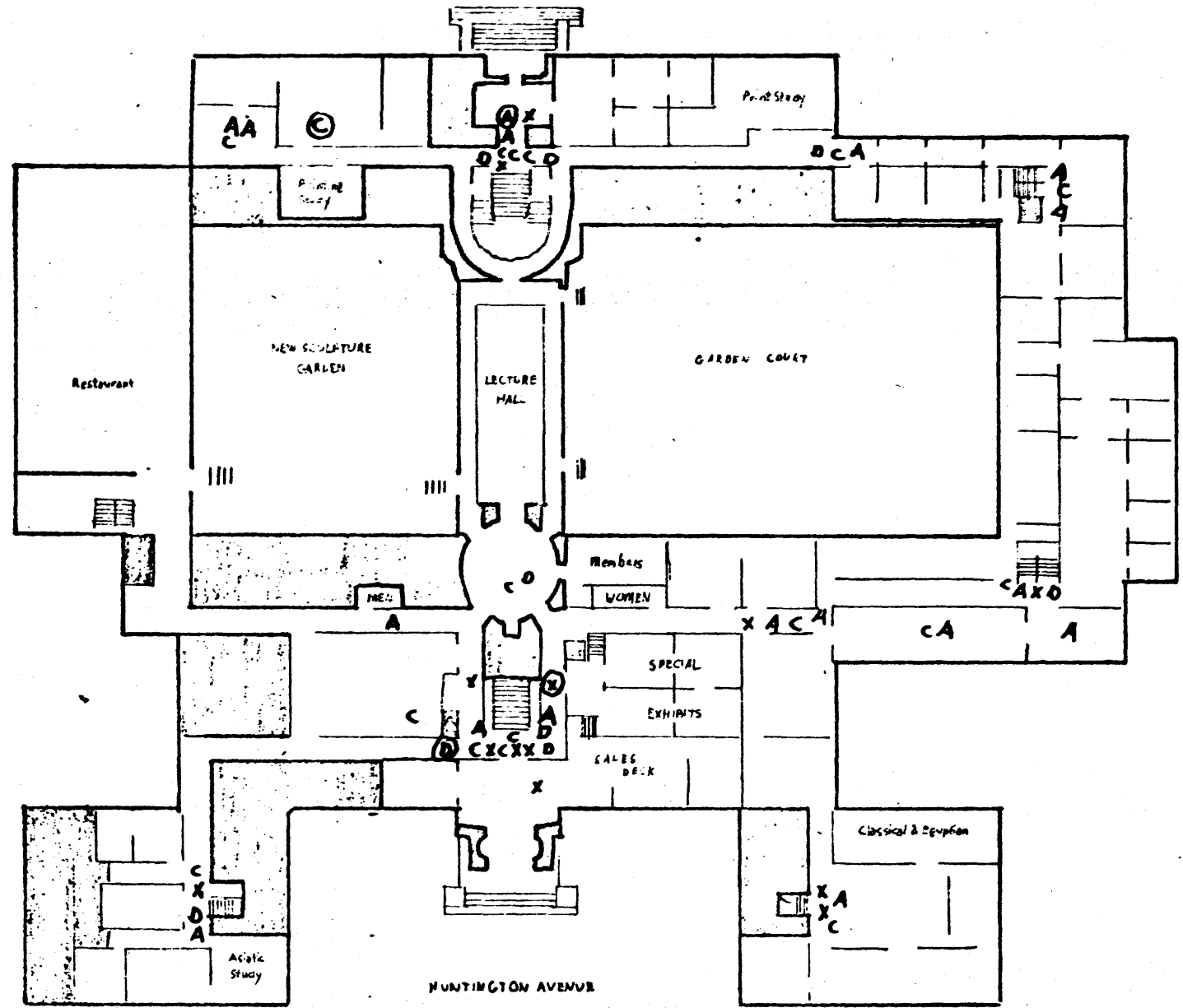
casual



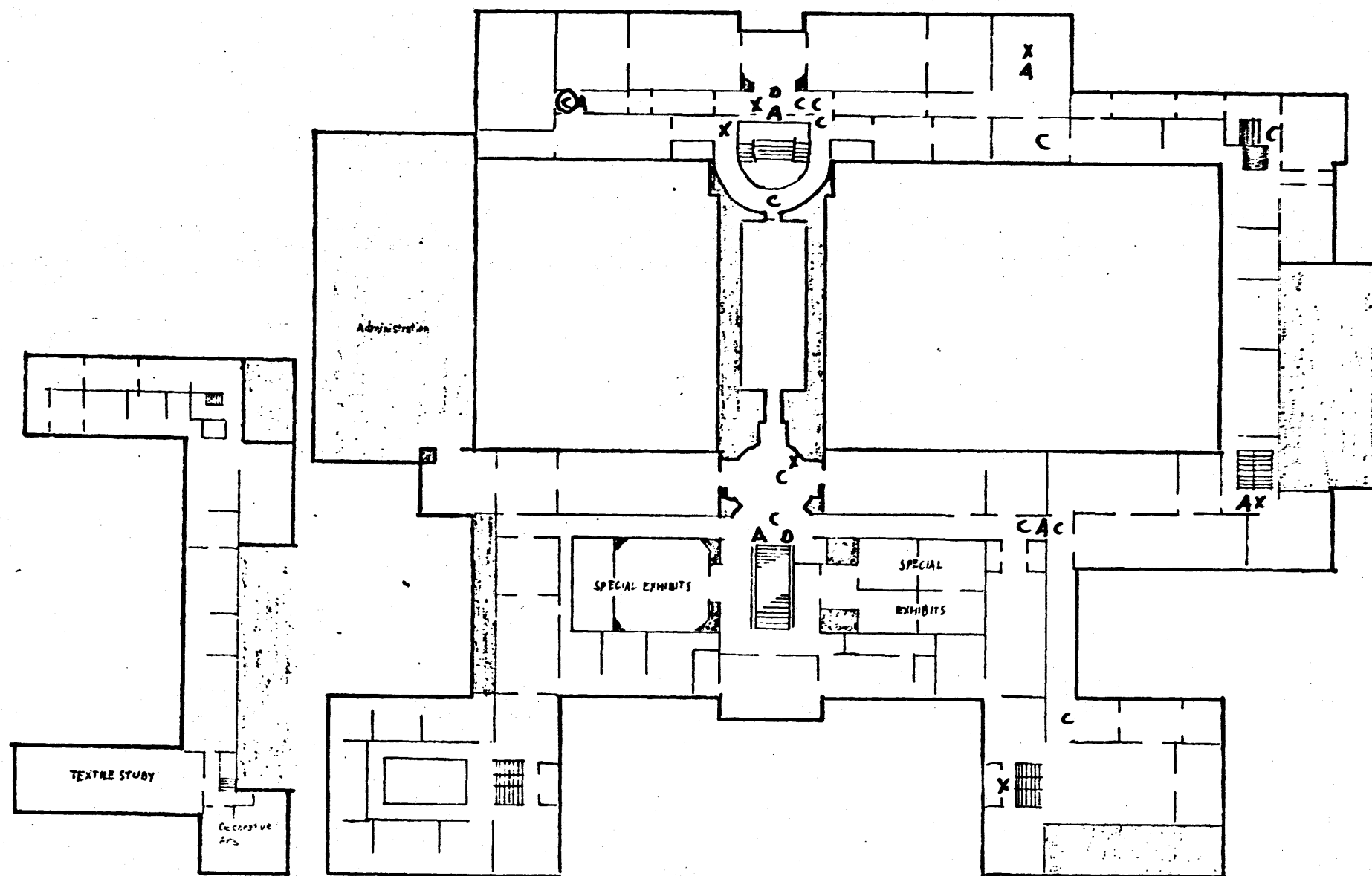
COURT FLOOR

MAIN FLOOR (2nd)

casual



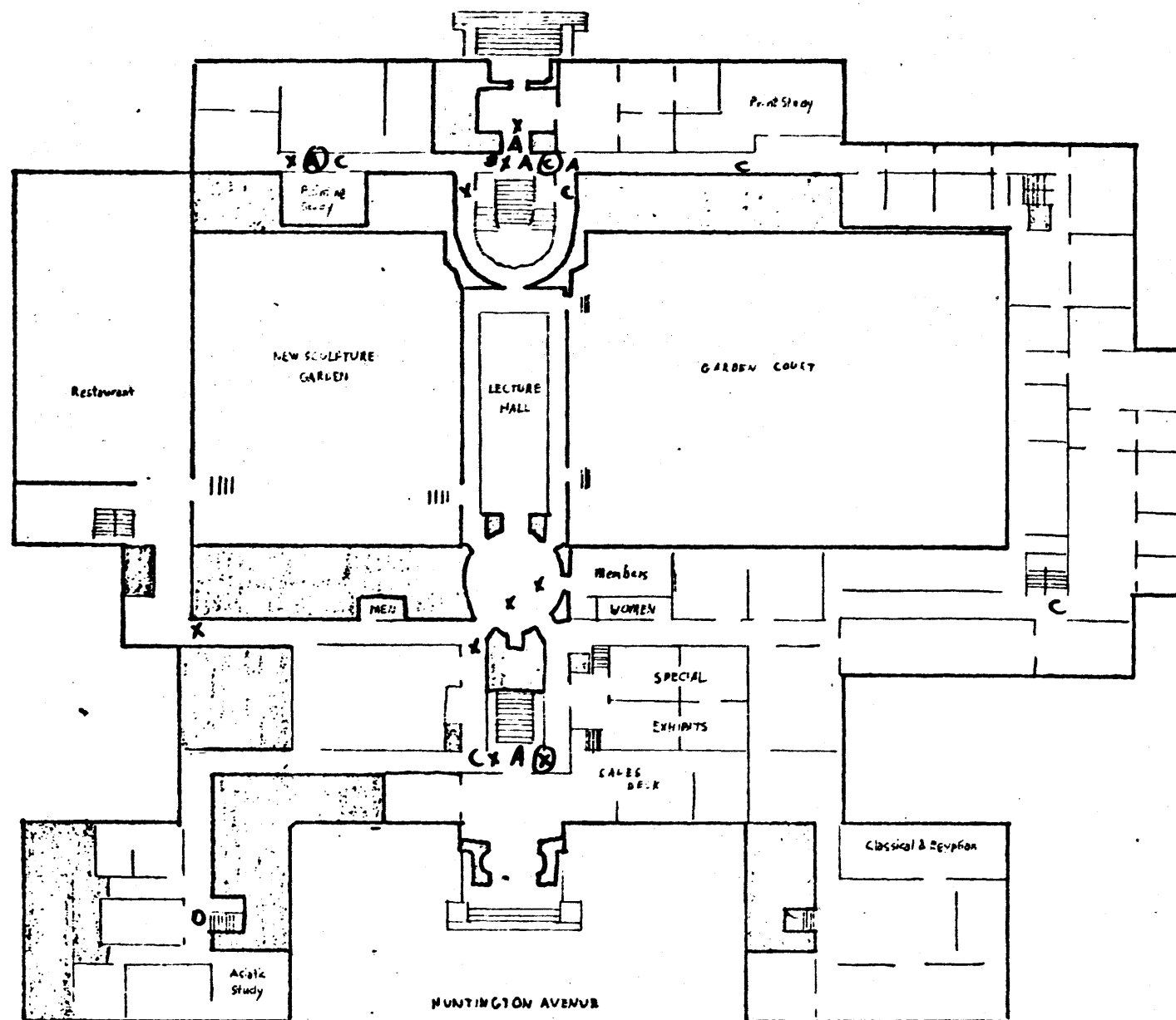
mixed motive



COURT FLOOR

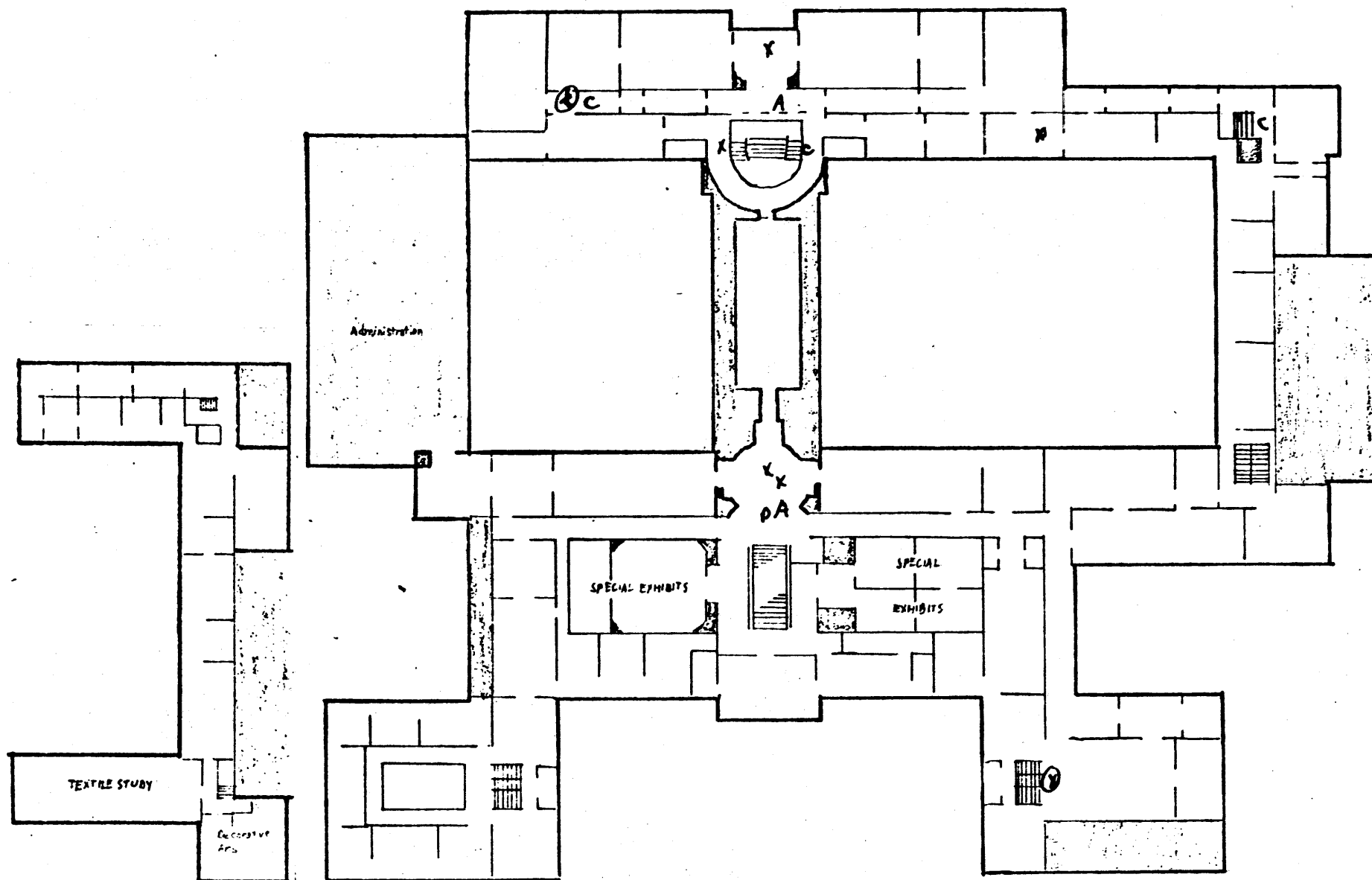
MAIN FLOOR (2nd)

mixed motives



HUNTINGTON AVENUE
GROUND FLOOR (1st)

purposeful



COURT FLOOR

MAIN FLOOR (2nd)

purposeful

Appendix E
Museum Survey

The state of the art in relationship to understanding movement patterns is for the most part not very well researched. There are few publications relating to this field, and it would appear that research into this field and the information systems they are associated with either is rarely done or is not publicized. In order to get an idea of what was being done, I wrote twenty-three of the largest museums in the United States and Canada, requesting information on how they are dealing with these issues. With a response rate of sixty percent, a fairly good idea of what is available can be drawn. It is regrettable, however, that for the most part it was the largest museums who did not answer my request.

For the most part, the purpose of the request was to generate ideas as to what can be done. In this appendix I will put forth a brief summary of the types of things which

are being tried.

To begin with, there are four museums currently doing research or major information renovation. The Cleveland Museum is consolidating a few of their collections into very cohesive blocks, and then issuing a map for each collection as the visitor enters the particular collection. The Detroit Institute is working extensively with their information system, consulting a design firm to aid them in designing a signage and information direction program. The identification program proposed utilizes a "total systems approach" to visual communication. Each element of the program is designed to reflect and reinforce all other elements, both visually and informatively. There is a heavy emphasis on signs of various kinds, the rationale being that this is the most effective form of disseminating information to the public at large and that this

emphasizes the identity of the museum. Finally, the Minneapolis and St. Louis museums are both working on new graphic systems, though no particulars are known.

Aside from this, a brief summary of what the fourteen museums provide is in order. Most museums provide a directory of one kind or another. Four have listings of galleries, one has a listing of galleries coupled with a picture of typical works of art from a series of such galleries, and three others label the map directly. One innovation on this idea is a brochure listing and explaining the twelve "most interesting" pieces of art, essentially creating a mini-tour. The only other mapping system in use is that which organizes the museum by collection. Three museums use this graphic design. Very little organized information is provided beyond maps and information desks. Only four have visitor centers.

FOOTNOTES

1. Michael O'Hare, The Audience of the Museum of Fine Arts; Boston: Museum of Fine Arts, April, 1974.
2. ibid., T2a.
3. ibid., T2b and T3.
4. ibid., T7.
5. ibid., T16.
6. ibid., T17.
7. ibid., T21.
8. ibid., T22 and T23.
9. Robert Weiss and Serge Boutourline, Jr., Fairs, Pavilions, and Their Audiences, Report to the IBM Communications Research, Office of the Director of Communications, 1962, p.120.
10. O'Hare, op. cit., T22 and T23.
11. Arthur Melton, Problems of Installation in Museums of Art, Washington, DC: The American Association of Museums, 1935, p.61.
12. Kevin Lynch, The Image of the City, Cambridge: The MIT Press, 1960, chap. 1.
13. ibid., p.8.
14. ibid., p25.
15. ibid., p.32.
16. Michael O'Hare, Map/Sign System for Directions, Boston: Museum of Fine Arts, 1973, p.1.
17. ibid., p.1.
18. Lynch, op. cit., p.47-48.
19. Michael Brawne, The New Museum: Architecture and Display, New York: Praeger, 1965, p.14.
20. Stephen Carr, City Signs and Lights: A Policy Study, Cambridge: Ashley/Myer/Smith, 1971, p.2.
21. Weiss, op. cit., p.31.
22. Gordon Reekie, "Toward Well-Being for Museum Visitors", Curator, Vol. 1, No. 1, 1958, p.93.
23. O'Hare, op. cit., T19 and T20.
24. Brawne, op. cit., p.14.
25. Melton, op. cit., p.38.
26. Harold Proshansky, ed., Environmental Psychology, NY: Holt, Rinehart and Winston, Inc., 1967, p643-33.
27. Weiss, op. cit., p.30.
28. ibid., p.30.